

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY

 I.—SOME RECENT CRITICISMS OF
SPINOZA (IV.).

BY H. F. HALLETT.

V. *Morality and Salvation*

ANY treatment of recent criticisms of Spinoza would be inexcusably incomplete that paid no attention to the strictures that have been passed again and again upon the ethical principles and conclusions advocated by the philosopher; and, in spite of the difficulty of presenting and defending his views adequately in the space that remains to me, I propose to devote this final article to some such purpose.

The alleged ethical shortcomings of Spinoza's philosophy are a somewhat older story than that of his personal moral integrity. It began in 1664 with the Blyenburgh correspondence, published in the *Opera Posthuma* thirteen years later, and it has continued without very much *dénouement* down to recent times, appearing with some emphasis in the criticisms of de Burgh and Taylor.¹

This consistency is not to be wondered at in view of the almost uniformly parallel misunderstanding of the metaphysical basis and framework of Spinoza's theory throughout the whole period, and especially of the doctrines of cause, finite individuality, freedom, eternity, and duration; and above all, nay rather, at

¹ W. G. de Burgh, *Great Thinkers (VIII): Spinoza*. (*Philosophy*, XI, 1936, pp. 271-287); A. E. Taylor, *Some Inconsistencies in Spinozism*. (*MIND*, XLVI, N.S., 1937, pp. 137-158, 281-301), (referred to as "T").

the root of all, the persistent assumption of the metaphysical priority of time—a conception denied *à outrance* by Spinoza himself. Such fundamental misinterpretations form an unpromising ground for effective criticism.

Taylor is undoubtedly the most vehement of recent critics of this, as of other parts, of Spinoza's philosophy, though not the most careful, acute, and philosophical, for his aim is iconoclastic rather than elucidatory and critical in the better sense of the term: being directed towards the discrediting of "Spinoza-worship"¹ rather than providing an effective criticism of the doctrine based upon a sufficiently serious effort to expound it. His reputation as a philosopher in our time, however, and the consequent *ex cathedra* effect of his assertions, render it expedient to treat his account with greater solicitude than its zealotry would otherwise invite. Logical slips of great importance may well be found in the work of the most eminent thinkers, but no philosopher could be called even competent who failed to detect incoherencies so blatant as those imputed to Spinoza by Taylor in relation to his ethical doctrine; or honest if, having seen them, he allowed them to stand in a work prepared for even posthumous publication with the meticulous care concentrated upon the *Ethics* for at least a duodecade. Natural moral sense, or "personal religious faith" might well prompt a "refusal to be logical" (and, not knowing its urgency, I am not prepared to blame subservience to the prompting), but not a refusal to admit the breach; yet I cannot discover, either in the *Ethics* or elsewhere, any hint that the doctrine of Spinoza is not "singleminded".

In the space at my disposal I can hardly expect to do more than lightly to indicate the manner in which I conceive the main ethical factors to find their place and exercise their functions within the Spinozistic metaphysics: *viz.* how, and how far, the finite *singularis* is free, the nature and efficiency of his moral endeavour, his true good, and the power that he possesses to find salvation from the "*summum periculum*" or "mortal disease" of the "vain and futile" flight *ad consolatiunculas creaturulae*. This does not mean, of course, that I seek to assimilate the ethical opinions expressed by Taylor with the system of Spinoza: in so far as ethical "objectivity" is taken as implying that "good" is other than a "relational quality"; the moral law as independently imposed on the individuals who "ought" to be governed by it; moral freedom as entailing "indetermination" in the real; there is no need to take pains

¹ T., p. 301.

to show that Spinoza is in agreement with Taylor, for plainly he is not. But, on the other hand, the absence of a Kantian insistence on "duty", "obligation", and anti-moral "inclination", is no proof of "naturalism"; nor is the exclusion of praise and blame a sign of ethical neutrality.

I have suggested more than once in these articles that the root of most of the objections that critics have raised to the philosophy of Spinoza generally has been the inveteracy of their own empiricism and "objectivism". In their anxiety to avoid "speculative exposition" they have accepted the very thing that their anxiety should have been directed against, *viz.* an *imaginative* exposition in terms of principles ignored or rejected by Spinoza himself. This is eminently true in the realm of ethics: having interpreted the earlier Parts of the *Ethics* wherever even remotely possible in terms of the metaphysical priority of time; having thought always of causality as essentially temporal and transeunt; they receive a shock when suddenly confronted by propositions in the later Parts grounded on the priority of eternity, and the essential and prior immanence of causality. The inflexible exponent or willing critic thereupon concludes that the philosopher is guilty of a "refusal to be logical", of introducing "extra beliefs" "going beyond what his metaphysical postulates can justify",¹ of "breaking away . . . from the very foundations of his own doctrine";² whereas in fact these later propositions, and the whole ethical doctrine, so far as it concerns liberation from the passions, are the very crux of the system, pointing back to its fundamental postulates, and to the true interpretation of the propositions to which an exclusively mechanistic turn had naively been given by the empiricistically biased interpreter.

i. "Automatum Spirituale"

Let me first of all underline some of the more important features of the account of the finite individual that I have attributed to Spinoza in contrast with those too often, and uncritically, assumed by his critics, and even by his expositors. "The mere description of man as an *automaton spirituale*", says Taylor,³ "will never satisfy any thinker who, like Kant, takes the moral law seriously." He does not explain in what sense he understands the term "*automaton*", though the general tenor of his discussion suggests that he takes it as connoting a self-acting "perpetual motion"-machine operating

¹ T., p. 301.

² T., p. 299.

³ T., p. 291.

under the principles of transeunt causality and reciprocity. His discussion also implies that Spinoza himself actually describes the finite temporal individual as an *automatum spirituale*. I do not know whether Taylor is really ignorant that Spinoza makes no such assertion: the term is introduced by the philosopher in the course of his discussion of the "true idea", and then only with a qualifying "*quasi*"; and its application must thus be limited to the finite mind as thinking adequate or true ideas, and not as involved in pseudo-cognizance: "True science proceeds from the cause to the effects . . . the mind acts according to certain laws, as if it were an *automatum spirituale*".¹ But, even so, nothing was further from the mind of Spinoza than the notion that true knowledge can be explained as a *totum* of transeunt psychical "causes", or even an "implicatory linkage" of reciprocating and successive judgements. The essence of truth, we have seen, is the inward self-generation of concepts whereby the reality of a *conceptum* is certified. Now this condition is only fulfilled in so far as the mind *thinks*; it has only indirect bearing on the imaginative "*nimbus*," that is by far the most extensive part of human experience in "this present life", and is the "field", though not the source, of moral endeavour. It is to *Deus quatenus finitus* that the term "*automatum spirituale*" is applicable in relation to man; and this only because it has absolute application to creative *Deus quatenus infinitus* alone. It is the *eternal* finite in constitutive *communitas* with its complement in *Natura naturata* that acts "*quasi aliquod automatum spirituale*". That *communitas* is partially occulted in "this present life" as struggle, opposition and co-operation, *sub specie durationis*, and the moral life is the effort to retrieve it.

I have again and again reminded the reader that the imputation of Lockian and Humian characteristics to the Spinozistic "idea" is a mischievous anachronism; there is no ground whatever, or none that will stand inspection, for Taylor's dogmatic assertion that "Spinoza simply identifies a man's mind with the series of his acts of cognition and volition";² so that his statement that "when I say that I am engaged in a certain train of thought, I mean, or suppose myself to mean, something more than that such a train of thought is an actual occurrence" has no pertinence as a comment on Spinoza, though it is perfectly true that the philosopher does not attempt to avoid this

¹ *De Intell. Emend.*, § 85. As thinking truly the mind is integral and eternal, not temporally pulverized.

² *T.*, p. 148.

absurdity by postulating an additional "self" that "owns" ¹ the train of thought. The integrity of the self is derived from its source: it is not superadded to its complexity or imaginative seriality; on the contrary, this is derived from the integrity. To begin with the seriality of sophisticated *Imaginatio*, and on that basis to seek for the integrity of personality, is only to pose an insoluble problem, and one insoluble *ex hypothesi*; for, as Hume found, there is no integrity and no power to be discovered among separate "ideas"—nor, I may add, even among temporally, causally, or implicationally, linked serial "ideas". Wholeness and efficiency must be sought at the source if pseudo-wholeness and *conatus* are to be explained in the sophisticated "*nimbus*" of *Imaginatio*. And this is evidently the view of Spinoza, for throughout, as Joachim ² says, he "implies that 'we' have an experience: that a single and continuous consciousness combines (or contains combined in itself) all the *ideae* which form the complex of our mental life"; it is indeed the integrity of the finite mode as it issues from its creative source that is the root of the "*conatus in suo esse perseverare*" that characterizes (and indeed constitutes) the durational suburb of finite individuality. The "eternal part" of the mind is integral, though in a derived and abstracted degree, for it springs from eternal immanent causality that derives from the self-generating *Natura*; and in its distinction it is proximately generated *in se*. But the "durational part" is no more than the eccentricized "perspective" of that eternal *communitas* which determines the degree of the perfection of the finite self in *Natura naturata*, thus reduced to process with a *nisus* derived from the causality of the macrocosm, that finitely urges the temporalized microcosm towards an integrity that its temporality indefinitely postpones, and its finiteness truncates. The "unity" of the serial mind of *Imaginatio* is an indefinitely postponed unity only because it issues durationally from the eternal unity of the finite self under the creative *nisus* of *Natura*.

Complete integrity is thus reserved to *Natura*; the integrity of the finite *singularis*, its individuality, its personality, is imperfect: *quatenus* eternal it is limited in amplitude and derivative; *quatenus* durational it is further limited by its alienation from itself and from God and from things, and its causality is inadequate to *conatus*. In *Natura naturata* it is a derived abstract *automatum*; in "this present life" it is no more than a "*pseud-automatum*".

¹ T. p. 148.

² *A Study of the Ethics of Spinoza*, p. 140, note 1.

ii. *Desire and Good*

Spinoza's psychological doctrine of desire, of its relation to *conatus* and to its object, as developed in Part III of the *Ethics*, is usually taken by his critics as if it foreclosed the philosophy to ethical development which requires the *emendation* of desire, the adequating of *conatus*, and the substitution of a moral or "true" good for the "natural" good. Closer attention to the matter will, I think, show that it does no such thing.

The well-known assertion that "we neither strive for, will, seek, nor desire anything because we think it good, but, on the contrary, we judge a thing to be good because we strive for, will, seek, or desire it",¹ has been the constantly recurrent text upon which depreciation of Spinoza's supposed amorality has been hung. Taylor's rehash of this familiar polemic will serve as an example: "on such an assumption neither a moral code nor a philosophy of morals is possible. Both are possible only on the presupposition that it is possible to pronounce on the *worth* of different human passions and desires by reference to a standard independent of the passions and desires to which it is applied".² This is an assertion to which, bating the term "independent", Spinoza is in complete agreement, as his distinction in the *Tractatus de Intellectus Emendatione* between the "vain and futile" goods of ordinary endeavour, and the "true good" of the philosophic life strongly suggests, and the references in the Preface to Part IV of the *Ethics* (where the specifically ethical discussion begins) to the "*exemplar*" necessary for ethics completely attest. Taylor is willing to admit the deliverance of "the great Greek tradition" that what we desire is always the "apparent good", but "the 'apparent good' and the 'good' are commonly different things".³ With Spinoza's imputed implication that "'this is good' means that this is being actually pursued" he connects "the much admired proposal to treat moral actions exactly as though they were geometrical figures"—a proposal that Taylor characterizes as "really ridiculous" because "it is to ignore their specific character as *moral*".⁴ Then follows a passage in which the familiar Blyenburghian *ignoratio elenchi* is once more expounded, but with remarkable carelessness or naivety of interpretation more worthy of that "metaphysical tiro" than of the author of *The Elements of Metaphysics*. To this I will presently return.

Spinoza's *dictum* is, of course, (i) an assertion that "good" is a "relational quality": a thing is good not in itself out of

¹ *Eth.* III, ix Sch.² T., p. 282.³ *Ibid.*⁴ *Ibid.*

all relation to an other, but good *for* an other; "good" means "good for". It is as meaningless to assert the goodness of a thing without stating or assuming *for* what it is good as to assert that the sun is distant without stating or assuming *from* what it is distant. "Good *simpliciter*" means good for the person judging, or for similar persons; "good in itself" means not good out of all relation to a referent, but good not as means to some other object, or under special conditions, or in combination with something else, but as complete objective end in itself, *i.e.* none the less *for* such and such a referent or class of referents.

But (ii) it is an assertion, further, that this relativity of good to a referent is no mere formal relativity like that of "distance" where the referent is a mere "origin" of measurement; nor even a "qualitative relativity" like that of a colour where the referent is an "origin" of estimation (as when we say "that mountain looks purple to me"); but the goodness is a function of the referent who is "good" (or, as we say, "bettered") by relation to the thing said to be good. The thing's goodness is its capacity to "good" the referent. In and by itself even the thing said to be good in itself has no such attribute, and the supposition that it has is only another instance of our proneness to allow verbal expression to govern philosophical opinion. The goodness of a thing is the betterment of the self that is judged to lie within its capacity when appropriately related to that self.

Now this "judgement" is, of course, an action of the self that judges the thing to be good; and it takes various forms according to the perfection enjoyed by the self: it may be no more than a semi-blind craving or appetite for the object; it may be a conscious striving or desire for it; or the will to possess it.¹ But these forms of *conatus*, one and all, are related to the thing that is the object of the endeavour as involving an estimation or "judgement" of value. Thus the value of a thing depends upon its nature (or our estimate of its value depends upon our idea of its nature), but not on this taken absolutely in itself. The value depends upon its nature taken in relation to the capacity of that nature to "good" the self (or our judgement of its value depends upon our judgement of this capacity); and it is in this sense that a thing is good because we "strive for, will, seek, or desire it": apparently good where our *conatus* involves assent to an uncertain or unassured judgement; truly good where it is certified or assured in its estimate.

¹ Cf. *Eth. III, ix Sch.* for the relations of "will", "desire", and "appetite".

But further, (iii) this "gooding" of the self can only be so described in so far as we estimate the nature of the self in relation to an "*exemplar*", and it is here that we pass to the conception of the *morality* of good as distinct from its psychological or physical character. It is often forgotten that Spinoza's *dictum* is formulated in the psychological discussions of Part III of the *Ethics* and not in the ethical discussions of Parts IV and V where its morality is explicitly considered. Yet Spinoza himself draws emphatic attention to this transition in the Preface to Part IV which Taylor appears to have read to little advantage. "One and the same thing may at the same time be both good and evil and indifferent. . . . (Yet) we must retain these words. For since we desire to form for ourselves an idea of man upon which we may look as an *exemplar* of human nature, it will be of service to us to retain these expressions in the sense I have mentioned. By 'good', therefore, I understand in the following pages everything which we are certain is a means by which we may approach nearer and nearer to the *exemplar* of human nature we set before us. By 'evil', on the contrary, I understand everything which we are certain hinders us from reaching that *exemplar*". Spinoza, it is true, is here speaking of the *exemplar* of "man", and not of "this or that man", for it is *Ratio* directed upon *communia* that is the cognitive source of the moral philosophy of Parts IV and V (*ad xx*); and an effort of speculative development is required to identify the intrinsic *exemplar* of this or that man with his real singular essence as *Deus quatenus finitus*: the source of his moral effort after his own proper perfection, *i.e.* after integration with his other and with his source, that has formal expression in the absolute imperative of morality, and inadequate manifestation in the *conatus in suo esse perseverare*. But speculative development is, of course, *tabu* among determined critics of Spinoza. The "minutest" scholar and the most zealous iconoclast, however, can hardly afford to ignore the doctrine of the rational *exemplar* of human nature.

One reason why Spinoza's *dictum* has been resented is the facility with which it may be misinterpreted as making altruistic conduct incredible; and I think that it is true that it does involve the incredibility of what I may, perhaps, call "pure altruism", *i.e.* the notion that a man can pursue the good of another in absolute independence of his own good. But to my mind it is a self-evident proposition that the good of a man is his own good even when the thing called good is the benefit of another. The *real* altruist finds his own betterment in the good of others;

he may thus sacrifice (if that is the right term) some immediate temporal betterment of some subordinate part of his nature, but not of his own true or eternal nature. That his own true good should be totally divorced from that which he makes his moral object seems to me incredible, for it supposes a moral action without a motive. Nor is this to explain away altruism as "rationalized" egoism; candid readers who have understood the Spinozistic notion of *moral* improvement (*viz.* the *emendation* of the intellect), and the distinction between the *preservation* of temporal being and its *improvement* (*i.e.* the preservation of *moral* being) will need little beyond the statements of *Ethics* IV, xxxiii-xxvii, xl, xlii, and *App.* ix, together with the recognition of Spinoza's general principle that the real life of the finite self is its *communitas* with its other of all grades, to convince them of the essentially rational altruism of Spinoza's ethical doctrine.

Now, according to Taylor, the priority of desire to good excludes the distinction of right and wrong, of merit and demerit, and consequently debases morality to a distinction of private taste; and, he thinks, the result is that Spinoza's "ethical" theory develops as a combination of pocomuranteism and ruthless brutality: the murderer, *e.g.* must not be blamed, but he must be killed like a venomous snake. A truly *moral* theory, on the contrary, will certainly blame him, but at the same time will regard him as "a man to whom we have obligations, and not a dangerous animal".¹ The short reply to this account of Spinoza's doctrine is that it is not true that Spinoza makes no distinction between "apparent" and "true" good (as the opening sections of the *Tractatus de Intellectus Emendatione* sufficiently attest, and the whole tenor of the latter propositions of the *Ethics* emphasizes); and that it is most unphilosophical to take an extreme illustration as the adequate expression of a general principle.² The persistence with which this type of criticism has recurred in the history of Spinozism, however, shows that such a laconic retort is in need of expansion to bring home its incidence.

Let me say at once that the root-cause of the difficulty is the

¹ T., p. 283.

² The man who "goes mad from the bite of a dog" and is "excused" yet "rightly suffocated" (*Ep.* lxxviii) is hardly comparable with the relatively sane criminal. Spinoza merely accepted the common treatment of his day, regrettable as it may have been. But this affords no basis for a polemic against his ethical system. Many of the customs now accepted by Taylor will doubtless be regretted in future ages, yet they may be based on detail—ignorance rather than bad moral theory or nature.

false interpretation of Spinoza's doctrine as a psychological "atomism": an atomic self is, and can be, no moral self, and so far as a man is degraded towards such a condition in "this present life" under the disintegration of time and passion he suffers "perdition". This is the *summum periculum* of the moral life; and such a man is hardly a "man" at all. The characteristic moral agent, however, is in no such case: true, his state at this or that epoch of his temporal life is no adequate expression of his personal microcosmic nature as a member of the *communitas* of *Natura naturata*; but it is not "atomic". His eternity is never far from him: in the very certainty of his reality he "feels and discovers by experience that he is eternal"² —*ago ergo sum*; even his durational actuality as he persists in love and strife with his environment lifts him above mere atomism—*conor ergo sum*. In so far as a man *acts* his ideas are adequately caused from within his own nature; in so far as he struggles they are inadequately caused, partly from within and partly (and imaginatively) from without; in so far as he is passive he is nothing. The false supposition that there is an independent natural order of temporal causes that stands in the way of morality and negates freedom is the sole ground of the supposed insoluble riddle elaborated by de Burgh³ as to "how man can ever rise . . . from a lower plane of knowledge to a higher", how he can sever "the deterministic chain" and initiate "the saving process of liberation". The "far-reaching incoherence" in Spinoza's philosophy imputed by de Burgh, is no more than a deep-seated incoherence in the mind of the writer himself. When he agrees with Guzzo³ that there is a contradiction in Spinoza's statement that hatred *is* increased by reciprocated hatred but *can be* destroyed by love,⁴ he forgets that in so far as there is integration (as there must be) in "this present life" *esse* is *posse*, just as in man's eternal life of *communitas* *esse* is *frui*, and in God *esse* is *creare*. The *summum periculum* of the bad man is the approximation for him, under the dispersal of time, of *esse* and *non posse*: "the wages of sin is death". In the life of struggle undoubtedly there is always a limit to what a man *can* do; but that he is unable to do anything at all because his actions are determined *a praeterito* is a gloss derived from an anachronistic theory of nature, and intro-

¹ *Eth.* V, xliii Sch.

² *Great Thinkers* (VIII): Spinoza. (*Philosophy*, XI, 1936), p. 286.

³ A. Guzzo, *Il pensiero di B. Spinoza*, pp. 290-291.

⁴ *Odium reciproco odio augetur, et amore contra deleri potest* (*Eth.* III, xliii).

duced by the critic himself. At all stages of its emanation and salvation the finite individual transcends its temporal actuality and participates in the eternal *niscus*. Nothing that possesses *any* degree of individuality (*i.e.* of reality) is a purely temporal being determined by mechanistic "causality"—for this is the realm of non-being, both individual and causal. Though a man may, in "this present life", be partly subjected to the causality of the confused "self-other" imaginatively represented as the transeunt causality of an "other-absolute", and thus in servitude "participate in non-being",¹ yet even here he is in part determined by his own immanent causality, and is thus so far free. And this freedom entails an urge towards salvation, high-impotence it may be, but authentic; for without this he is nothing. The limitation of the ability of a man to achieve salvation is not independent opposition by mechanistic "causes", but the negativity of his own actuality—limitation to restricted steps in the "emendation of the intellect"; and though this may be, and often is, hypostasized to seeming ineluctability by the pretence that is "privation", it is never absolute, and may be mitigated by the right use of moral leisure, by the cultivation of "exertions",² by the aid of the better instructed or better natured, and by that happy contingency that is sometimes called "the grace of God" by those for whom God is no more than the "asylum of ignorance".

iii. "Cum Natura Pugnatur"; "A Quo Natura Abhorret"

It would be instructive to examine in detail the objections originally advanced by Blyenburgh, and Taylor's summary account of certain of them, and I hope to be able to do this elsewhere. Here, however, I have space only to consider one, and not the happiest, of their efforts. It concerns the "motives" actuating the finite temporal being in its movement towards or away from a greater perfection. Blyenburgh had argued that if, as Spinoza had asserted, to God evil is no more than negation (though it is "privation" to the sinner) so that God has no knowledge of evil, it is incredible that he will punish the evil man: "what reasons are there, then, why I should not eagerly commit all villainies, since I escape the judge? Why not enrich myself by detestable means? why not do whatever pleases us indiscriminately, and whatever the flesh prompts us to?"—

¹ "The wicked . . . are no more than tools in the hand of the master, that serve unconsciously, and perish in the service" (*Ep. xix*).

² *I.e.* "active affectus" as opposed to "passions".

and so on through the usual polemical catalogue of crimes permissible to the Spinozist. Spinoza's reply is that morality is not a mere matter of sanctions, or obedience to a *feared* authority, but the essential life of the soul, just as sin is its essential suicide: "surely he who only abstains from (crime) from fear of punishment (which I hope is not the case with you) in no way acts from love, and embraces virtue as little as possible. So far as I am concerned, I avoid or endeavour to avoid crimes because they expressly oppose my individual nature (*expresse cum mea singulari natura pugnant*), and would make me stray from the love and knowledge of God."¹

This vigorous sally into the moralistic camp proved too much for Blyenburgh's urbanity and only extreme irritation could have concealed from him the *ignoratio* that informs the analogical self-defensive distortion of his reply: "You avoid the things that I call wicked because they oppose (*pugnant*) your individual nature, but not because they involve vice. You refrain from doing them just as we refrain from eating food that disgusts us (*a quo natura nostra abhorret*). Surely he who avoids evil things merely because they disgust him cannot brag about his virtue."²

The same irritation is observable also in Taylor's discussion of this point: Spinoza, he says, refrains from acting like Nero because such actions do not agree with his nature—"exactly as I abstain from certain dishes because they do not agree with my digestion";³ and he rightly commends the assertion of Blyenburgh that "he who *only* abstains from crimes because they disagree with his particular nature cannot plume himself on his virtue". It is nothing to Taylor that what Spinoza had said was that he seeks to avoid crime because it is *in conflict with* his nature, whereas Blyenburgh sophistically substituted the gloss that this means that he does so only because, like offensive food, it *disgusts* him; and unlike Blyenburgh, who at least had the excuse of provocation, he neatly covers the ambiguity under the question-begging phrase "do not agree with my digestion"—which may mean either that the food is unsuitable or that it is merely disliked. The issue is that between mere taste and grounded judgement: if Blyenburgh had said that Spinoza avoids crimes as he avoids food that is *unsuited* to his alimentary nature, food that he cannot

¹ *Ep. xxi. Cf. Eth. V, xli Sch.*

² *Ep. xxii.*

³ *T.*, p. 284. It is characteristic of Taylor's treatment of Spinoza that he attributes to Spinoza himself the analogy proposed by his opponent—including the parentheses and textual reference to reassure the trustful reader. The labour of iconoclasm demands no nice precision.

digest, the analogy would at least have had some pertinence, though it would not have relieved his irritation or done anything to clarify the issue. The whole distinction of virtue and vice turns upon the true judgement of the former and the false judgement of the latter. The good man is one whose deeds and thoughts are determined in accordance with the clear idea of God; the bad man one whose deeds and thoughts are determined only in accordance with confused ideas of "earthly things". The latter acts from *taste* at best, the former from a judgement of propriety based upon a true idea of the relation of self with complement and source. The fact is that Blyenburgh introduced the analogy with the sole and sophistical intention of scoring a debating point, and Taylor "improves" on him by attributing the analogy to Spinoza himself. Blyenburgh was, of course, as Taylor says, "simply right" in saying that morality is more than a matter of taste: he was not right, nor is Taylor who should have known better, in supposing that the principle is in opposition to the ethical doctrine of Spinoza. The superstructure that Taylor erects on this childish misinterpretation is equally irrelevant; to say that Spinoza's explanation of the distinction of the good act or man and the bad one, by reducing it to a difference in degree of *realitas*, fails because "degree of reality" means nothing (the apostle Paul being no more real than the emperor Nero)¹ overlooks the whole structure of Spinoza's epistemology, according to which *realitas* is action, *i.e.* self-generation or generation through self; and Spinoza was as little likely as Kant to "equivocate on the word *perfect*".² I do not even see why it should be supposed that Spinoza's rejection of anthropomorphism in theology necessarily implies an equal objection to theomorphism in ethics, *i.e.* to saying that the good man is "more like God"—certainly he is more like *Deus quatenus finitus*. When, however, Taylor goes on to offer his "best defence" of Spinozism in this matter in terms of the extended insight of the good man "into the universal order and concatenation of things", the term "concatenation of cause and effect throughout nature" indicates the nature of the "insight" of which he is thinking. Undoubtedly, a "great man of science" in this sense of the term "insight" may be "a very bad man indeed", just as a man who has not this sort of exceptional excellence may be highly virtuous. But here, once again, Taylor's apparent ignorance of Spinozistic epistemology blinds him to the significance of the insistence on the "*emendation* of the intellect" as the philosophic road to virtue.

¹ T., p. 285.² *Ibid.*

As to the "curious silence" of Spinoza about "justice" and "obligation", it is not impertinent to mention that Plato himself shows also a curious silence about moral obligation, and speaks of justice, not in terms of *debitum*, but as "the health of the soul". The prominence of the conception of duty in Kantian doctrine is connected with the transcendental mode of approach to ethical philosophy, the value of which I should be the last to depreciate, and not to his superiority over all others as a moralist. Every moralist worthy of consideration takes "obligation" in some form or other as a foundation-concept of ethics, though the object of the *debitum* varies from theory to theory. Certainly Spinoza did so, and not alone in the impressive opening sections of the *Tractatus de Intellectus Emendatione*, and in the insistence on the difficulty of the moral life in the closing words of the *Ethics*; it is implicit throughout the whole ethical system which cannot be understood at all if it is denied or ignored. Take for instance Spinoza's analysis in the letter to Blyenburgh following that to which I have been referring: "For example, Nero's matricide in so far as it contained something positive was not a crime; for Orestes too did the same outward deed, and had the same intention of killing his mother, and yet he is not blamed, at least not in the same degree as Nero. What then was Nero's crime? Nothing else than that by this deed he showed that he was ungrateful, unmerciful, and disobedient. . . . God was not the cause of (these things), although he was the cause of the act and the intention of Nero."¹ The action itself as an action has its own perfection or reality, and as such may be said to be either virtuous or vicious according to its relation to the moral order. The good soldier kills the enemy in the interest of his "country" (i.e. the *communitas* that its organization subserves), and through his country the *communitas* of mankind; the murderer's same deed is for his own presumed private advantage at the expense of another, and ultimately of each man's civic *communitas* in which the murderer himself must participate, and thus contrary to general *communitas*. This is the "privation" of his act that constitutes it a villany while the same act in the good soldier is virtuous. It is not the deed, or the intention, that is virtuous or vicious but the response to the demand of the man's own moral nature either for *obedience* to moral precepts or to secure and ensue *communitas* with God and with things. This is what we demand of ourselves: our proper perfection as eternal microcosms in constitutive com-

¹ *Ep. xiii.*

munitas with our complement and our source is operative in the moral consciousness as the *nisus* to fuller *communitas sub specie durationis* congruent with our insight into moral principle. Nero's action was vicious in proportion to his insight into its contrariety to moral law, whether conceived as the law of God or the nature of the real. If "knowing the better he chose the worse" his act was vicious because disobedient, though such a choice of the worse is possible only in so far as knowledge of the better is defective. He who really *knows* the better, *i.e.* as certified knowledge and no mere dogma or hearsay-opinion, *cannot* choose the worse. Thus to Blyenburgh's question whether a mind for which the pursuit of lust and the perpetration of crime are not in conflict (*non pugnaret*¹) but in agreement with its individual nature, would have any "ground for virtue that would necessarily persuade it to do good and avoid evil", Spinoza replies that the question "supposes a contradiction", as if one asked whether on the supposition that suicide is in accordance with a man's reality he ought not to hang himself: for of course he ought. In relation to such a perverted human nature crimes would be virtuous because they would best realize the man's true nature. But that there could *be* such a man is precisely what Spinoza's whole doctrine denies. The question that Blyenburgh should have asked (and perhaps thought he was asking) is: how can a man, here and now in "this present life", when he at once desires to pursue lust and crime, and yet also entertains the demand of his individual nature to seek *communitas* with his other, or to obey the moral law, "pull himself together" (*se cogere*) to obey the demand and eschew the desire? For this is certainly a matter of crucial importance for practical morality, the answer to which must be in terms either of the "emendation of the intellect" or of the love or veneration of the mind for God as lawgiver—the one being the philosophic way of enlightenment, the other the way of obedience.

iv. *Moral Improvement*

We have seen that according to Spinoza the moral life is not in essence a temporal movement towards the improvement of human nature but an approximation to that nature by which "this present life" approaches the reality of eternal *communitas* in *Natura naturata*. But it will be objected, and I think justifiably, that the real issue is how this approximation is actualized from the point of view of the temporal individual at this or that

¹ The word is here Blyenburgh's own.

moment of his present life. How is a man's actual "nature" saved from its unnatural actuality and approximated to its real nature? Is the improvement inherent in temporal practice, or does it demand some special "effort" which may or may not be forthcoming on this or that occasion? And is this "effort", too, inherent when it is present and irretrievable when it is absent? These are searching questions, and in spite of their somewhat question-begging formulation (under the suggestion of temporal causality, transeunt or final) I will attempt to make clear the kind of answers entailed by the philosophy of Spinoza.

Let me, in the first place, deal briefly with the relatively subsidiary question of the inherence of improvement in temporal practice. It is empirically obvious that practice does not necessarily tend towards moral improvement: men get more vicious as well as more virtuous in the course of "this present life". "Practice makes perfect", but not *morally* so; "experience teaches", but it does not necessarily teach morality. The man of inflexible "good will" who does "improve" with experience already enjoys the root of morality, and improves primarily in the adjustment of means to ends. He becomes *morally* better chiefly in the sense of more effective. The man of "weak will" makes little improvement of any kind save in the art of avoiding painful issues; and the man of vicious will may even become more viciously effective and more confirmed in wickedness. But who cannot see that the validity of these statements is based upon the sophisticated intellectual *schema* under which they are proposed? What is this "will" that is characterized as "good", "weak", or "vicious", and how is it supposed to operate in relation to the man's deeds? Is it something that a man *has* together with his impulses, appetites, desires, *etc.*, and in addition to his intelligence; or is it something that he *is*, while also being impulsive, appetitive, desiderative, and intelligent? And does his effective will determine his actions transeuntly in accordance with or in opposition to his impulses, appetites, and desires; or is this co-operation or struggle immanent in the very man himself; or partly immanent and partly transeunt? And how is his intelligence related to his will and his impulses, appetites, and desires? Is it a mere means to the practical effectiveness of the will, and of the desires, appetites, and impulses—of the struggling or co-operating "causes", or is it biased in favour of, or against, the will, the desires, *etc.*? Indeed, is not the whole nomenclature significant of abstraction, sophistication, and hypostasization of *entia*

imaginationis: of vague exhortatory or dehortatory utility, but with no legitimate place in an analysis of the moral situation—its *prima facie* appearance of definition and expository lucidity being but the cloak of real confusion, misconstruction, and hermeneutic impotence?

It is greatly to the credit of Spinoza that he firmly refuses to discuss the ethical problem in terms of any such jejune rigmarole: "will", "desire", "appetite", are alternative expressions for the *conatus in suo esse perseverare*¹ which is "nothing but the actual essence of the thing itself",² and is the imperfect expression of the eternal *actio* that is the proper perfection of the thing in the *communitas* of *Natura naturata*. Furthermore, "will" (or the *conatus qua* related to the mind alone) is identical with the intelligence,³ which is by nature causal, though in the case of finite intelligence *derivatively* causal.⁴ There is thus no need to suppose the introduction of some extraneous "effort" to make an idea effective; though I have admitted that the question does remain as to how we can secure those *more* adequate ideas with their superior effectiveness which are the root of temporal moral improvement.

Let me say at once that by "securing" these I mean not merely "entertaining" them as *dicta* derived by hearsay, or from the opinions of experts, but truly *thinking* them as "beyond a peradventure"—for only so can they be genuine ideas, certified or assured, and by nature effective: or indeed be truly said to be "secured".

There are two main ways of achieving this result according to Spinoza, corresponding to two main types of morality: *the morality of obedience* and *the morality of enlightenment*, as I shall call them. To these we may add, for the sake of completeness, and also because of its prominence in human life, *the pseudo-morality of sanctions*. Spinoza has a good deal to say about the first two, as well as admitting the practical utility of the morally deficient third.

(a) *The Morality of Obedience*

The reader will recall that in the course of his correspondence with Blyenburgh, Spinoza explained that the sin of Nero in killing his mother consisted not in the outward deed or inward intention but in the "ingratitude, mercilessness, and disobedience" that informed it;⁵ and it is one of the chief contentions of the

¹ *Eth. III, ix Sch.*

² *Ibid., vii.*

³ *Eth. II, xlix Cor.*

⁴ *Ibid., xviii.*

⁵ *Ep. xviii.*

Tractatus Theologico-Politicus that the Bible teaches no metaphysical doctrines about the nature of God and his relation to men, but solely such knowledge as is needful to convince men that he is "the perfect pattern of the true life".¹ "It is the object of the Bible to make men not learned but obedient".² "A man is pious or impious in his beliefs only in so far as he is thereby incited to obedience, or derives from them licence to sin and rebel. If a man by believing what is true becomes rebellious his creed is impious; if by believing what is false he becomes obedient his creed is pious; for the true knowledge of God comes not by commandment but by divine gift. God has required nothing from men but a knowledge of his divine justice and charity: and that, not as necessary to scientific accuracy, but to obedience".³ It is on this basis that Spinoza formulates the essential dogmas of universal religion: the divine existence, supremacy, justice, and mercy; his unity, omnipresence, supreme right, dominion, and freedom; his right to human obedience, his laws of justice, mercy, and love towards one's neighbours; and the doctrine of salvation and perdition as dependent on obedience and disobedience respectively.

Obedience to God as he is revealed through the prophets (i.e. not predictors of future events but interpreters of God's will), however, is not the only obedience that conduces to piety: "It is certain that duties towards one's country are the highest that men can fulfil . . . there can be no duty towards our neighbour which would not become an offence if it involved injury to the whole State, nor can there be any offence against our duty towards our neighbour, or anything but loyalty in what we do for the sake of preserving the State. For instance, it is my duty⁴ when my neighbour quarrels with me and wishes to take my cloak, to give him my coat also; but if it be thought that such conduct is hurtful to the maintenance of the State, I ought to bring him to trial, even at the risk of his being condemned to death."⁵

¹ *Tr. Theo.-Pol.*, xiii.

² *Ibid.*

³ *Ibid.*

⁴ "In the abstract", Elwes interpolates; "in a state of nature", says Taylor blunderingly (*T.*, p. 293). Spinoza, of course, does not suppose Christian morality to apply to the "state of nature". It is my duty as a religious man believing the divine revelation.

⁵ This is the passage on which Taylor founds his assertion that in his political theory Spinoza "ignores morality". What, in fact, Spinoza asserts is that "ideal" morality only remains "ideal" under conditions essentially ideal, or where the unideality of the conditions does not negate the effectiveness of the ideal demand—for reason cannot negate reason, and the State is a prior condition of the possibility of applying ideal morality.

For the multitude, therefore, Spinoza conceives morality as in the main a matter of obedience to the commands of God either as revealed by the prophets or as embodied in the State regarded as the rational basis of human survival. And such obedience, when truly such and not the effort to avoid sanctions, is based on belief in the prophetic revelation or recognition of the superiority of the civic life. Reverence for God and for the State is what provides the superior efficiency that constitutes the strength of the moral ideas in their opposition to passion. The strength of the *affectus* of veneration or devotion¹ in so far as it is a continuant that more or less uniformly moderates the fragmentary passions is for the most part, with the majority of men, in normal times, sufficient. The man of simple faith, or the true patriot, will be obedient, not merely from fear of perdition or the hope of salvation, or again, from fear of the gallows or the hope of civic reward, but from natural piety or native civic virtue. In so far as he is, it is the love of God or the love of his *conceives* that constrains him; and these are not passions but "exertions": principles of integrity and co-operation, and not principles of alienation and strife. This is the morality of obedience at its best and surest. Doubtless it is easily confused with the *pseudo-morality of sanctions*, and doubtless it is often contaminated with it (just as it may be partially elevated, by insight into the harmony of the laws and commandments with reason, to a genuine morality of enlightenment), but it is distinct from both. Obedience can only rightly be so called in so far as the motive is no extraneous passion artfully imposed by the law-giver or the prophet, but devotion to accepted and venerated authority. The pseudo-morality of sanctions lacks the inward reality of morality. It is in fact a sort of pre-morality, and I have no space to set forth Spinoza's views of its value and ethical contemptibility. In relation to the civic State it is, of course, essential—men being what they are: "although all are persuaded that religion teaches every man to love his neighbour as himself . . . yet . . . this persuasion has too little power over the passions. It avails, indeed, in the hour of death when disease has subdued the very passions

In the "state of nature" Christian morality would be wholly inapplicable; thus to apply it unconditionally in the "civic state" so as to undermine that state would be to cast out Beelzebub by means of Beelzebub—a process advantageous only to Beelzebub himself.

¹ *Veneration* is astonishment (i.e. imagination of a thing as egregious) at a thing much superior to ourselves; and is *devotion* in so far as it is united with love for it (*Eth. III, lii Sch.*).

and man lies inert, or in temples where men hold no traffic, but least of all where it is most needed, in the lawcourt or the palace. . . . Reason can, indeed, do much to restrain and moderate the passions, but . . . the road which reason herself points out is very steep; so that such as persuade themselves that the multitude, or men distracted by politics, can ever be induced to live according to the bare dictate of reason, must be dreaming of the golden age of the poets, or of a stage-play."¹ And what is true of "the bare dictate of reason" is true also in great measure of the religious and civic sentiments. As to the ethical value of this pseudo-morality I need only refer the reader to the indignant words of *Ethics V*, *ali Sch.* and to Spinoza's sly dig at Blyenburgh's "virtue".

(b) *The Morality of Enlightenment*

I have already suggested that the main difficulties that have been felt by critics of Spinoza's central ethical doctrine arise from their failure to understand and to apply the causal doctrine upon which his whole philosophy is framed—particularly in relation to human activity *sub specie durationis*. In the real, finite and infinite, there is no transeunt causality; for this is the eccentric appearance of immanent genesis emanating from the self-reference of the finite self, by which the complement by *communitas* with which in *Natura naturata* the finite self is real, is partially occulted and thus makes appearance as an other. If now the finite self were a mere "finite centre" this self-reference would result in its diminution *sub specie temporis* to nonentity—a condition only asymptotically approached by the *ens simplicissimum*. Man is a microcosm of *Natura*, and his self-reference involves him therefore only in partial impotence: he is, even in "this present life", in part eternal and has adequate knowledge of God and co-operation with "things". His temporality partially inadequates that knowledge to *Imaginatio* and brings him into strife with things as imaginatively alienated. Thus transeuncy is not something independently limiting him *ab extra*, but the shadow of his own self-reference or "original sin". What is at issue, therefore, in moral improvement is not man's power over given external "causes", but over himself as he appears in the self-referent perspective—his power to emend his intellect, to generalize his metaphysical relativity. This seems to be recognized so far by de Burgh when he expresses his ultimate dissatisfaction with Spinoza's theory as

¹ *Tr. Pol.*, I, v.

resident in the issue "how man can ever rise . . . from a lower plane of knowledge to a higher";¹ but the whole issue is clouded for him because he takes transeunt causality as a metaphysical prior, and the "emendation of the intellect" as *mechanistically* limited by the existing impulses, desires, etc., that appear as the actual essence of the man at the moment of action. So again, when Taylor says that consistency in the elaboration of the doctrine of "intellectual conversion" demands that Spinoza should "be prepared to hold that truth, at least truth about good, as truth, has an inherent attractive power which can master the emotions", that "reason must be able to encounter and defeat the passions in its own strength",² it is equally evident that he makes no distinction between the causality of reason and the pseudo-causality of the *affectus*, interpreting Spinoza's assertions that *affectus* can only be restrained or removed by opposing and stronger *affectus*,³ and that no *affectus* can be restrained by "the true knowledge of good and evil" *qua* true, but only *qua affectus*,⁴ as meaning that "a true and adequate idea has in itself no more hold over our 'passional nature' than a false and inadequate one; it can only prevail if it *happens to be associated* with a more powerful 'affect'". This is but another example of the fatal mischief of attempting to expound Spinoza's philosophy under an anachronistic empiricistic *schema*. Taylor is not even checked in this enterprise by the statement of *Ethices IV, viii* interposed between the very propositions on which he bases his criticism: "Knowledge of good and evil is nothing but an *affectus* of joy or sorrow in so far as we are conscious of it", which makes it clear that determination by "knowledge of good and evil" is not determination by reason, but by *Imaginatio* (which is not necessarily false, but always in fact in some relativistic eccentric sense based on truth), and it is thus that it operates in the temporal life. But this is not to say that truth is ineffective in practice, but only that in the imaginal life its effectiveness is represented *sub specie affectus*, i.e. as informing the passions and "exertions" of the actual essence of this or that man. So far is it from being true that reason can do nothing without the "chance association" of an *affectus*, reason alone is fully active, and the "exertions" of the durational mind are the imaginative expressions of that *actio pura*. "Killing truth" may not "glare upon"⁴ the passions and nullify them at the mere choice of the durational agent,

¹ *Great Thinkers (VIII): Spinoza. (Philosophy, XI, 1936)*, p. 286.

² T., p. 287.

³ *Eth. IV, vii.*

⁴ *Ibid., xiv.*

⁵ T., p. 287.

for the passions also have truth at their source, though relativized and truncated, but the "exertions" are the durational appearance of the *actio* of reason, *sub specie conatus*. In them the real eternal self lies *perdu*; and since temporal duration is no metaphysical prior, but a derivative of eternity, it is not in principle impossible, but only in fact a rarity, for the self to enjoy a "miraculous" conversion, or centrification, by which the "exertions" flame up to eternal action, nullifying the passions in the sudden (but not chosen) vision of the *communitas* of all things in the creative focus.

The answer, then, to de Burgh's question "how man can rise, conformably to Spinoza's system, from a lower plane of knowledge to a higher", is, first, that he cannot do so on this or that haphazard occasion by the exercise of "a motiveless choice between motives",¹ but, secondly, that he can do so because he is *free* in the measure of his actualized microcosmicity, *i.e.* he is partially self-determining in accordance with the self-legislation inherent in his self-hood at all stages of his creation and emanation. By nature he is a self-enlightening individual: remove this power and he is nothing at all. The root of freedom is in him, though never its completion *sub specie durationis*. In so far as he *is* at all, he has adequate and certain knowledge, even if it is no more than the certainty of his own existence and finiteness, for this is his reality as a mind. And this adequate knowledge as such has self-generative, though derived, power. No man is a series of states, and no-one before Hume ever seriously suggested that he is—nor, perhaps, did Hume.

Again, when Taylor says that "Spinozism, like all 'naturalistic' doctrines of morals, cannot consistently admit determination by such a motive"² as the judgement of rightness, he only betrays his complete failure to understand the theory that he is so zealous to censure. Mere "rightness" is, in fact, the characteristic motive of "the morality of obedience"; and intelligible "rightness" is not other than accord with the deliverance of *Deus quatenus finitus*, the man's eternal self in the *communitas* of *Natura naturata*, which defines his true good, or what is his true profit. And this is his sufficient motive in so far as it is understood as certain: for in face of that *knowledge* (as distinct from hearsay, dogmatic, or even venerated, opinion) no man can "choose the worse".

So far, then, as I have grasped the difficulties expounded by de Burgh and Taylor, they are generated and supported by the

¹ T., p. 291.

² *Ibid.*

false conception that the passions that oppose man's liberation operate as independent "forces" that are a part of his nature only as falling within the series of states that we denominate "the man"—a conception wholly foreign to Spinoza. The passions derive their power from the immanency that they partially occult, or rather, of which they are the partial occultation. It is knowledge that is the freedom of the mind; and "learning" is no mechanistic process, but a process of self-enfranchisement. But, it may be objected; the passions stand in the way of learning! As well might we say that ignorance stands in the way of knowledge—an evident and trifling analytic proposition. What stands in the way of learning is error, *i.e.* pretentious ignorance, constituted by "privation": but this is no ineluctable impediment operating as a mechanistic "cause", but an enemy with a traitor in his citadel ever seeking to open the gates. Spinoza never said, and no-one with any real understanding of the moral life will suppose, that the moral life is easy—a mere matter of free choice: the way of salvation for the isolated soul is indeed "steep" and "difficult", nevertheless it may be found just because passion is no mechanistic "force", and reason holds the key to its citadel. If critics of Spinoza will cease to imagine the human mind as a series of states, and their "causality" as mechanistic, and will take the imaginative seriality and transeuncy as the imperfections of the durational mind, and not its native perfection, as derivatives and not as ultimates, they will see that "though strait is the gate and narrow is the way that leadeth unto life", and "though few there be that find it", there is nothing in the doctrine of Spinoza to suggest that it is impossible or a mere matter of haphazard. There is nothing actual in "this present life" that is not derived, directly or eccentrically or privatively, from eternal reality, finite or infinite; and consequently no durational "present" is utterly closed to the eternal. To be is to be active; to be active is to be free; consequently, nothing that in any degree *is* is doomed to perdition or saved *by accident*. It is saved *sub specie durationis* by its own "exertions", informed by the *Deus quatenus finitus* that it eternally is, and durationally is, in Augustinian phrase, "towards": as the theologians say, "Christ dwelleth in us". "Indetermination" by mechanistic "causes" is undoubtedly the presupposition of morality; but this is nothing miraculous in universal etiology, for *nothing is so determined*. But absolute indetermination is the bankruptcy of science and morals alike.

(Concluded.)

II.—THE LOGIC OF QUESTION AND ANSWER

By A. D. RITCHIE.

IN his *Essay on Metaphysics* (1940), and also in his *Autobiography* (1939), Professor R. G. Collingwood has developed a logic of question and answer which deserves serious consideration. I believe it is an important contribution to philosophy, but also that it needs to be restated in part, and amplified. It has been expounded almost as if it were an attack on traditional logic ; whereas it is a development on quite orthodox lines, though contradicting certain recent misconceptions. The author's statement, too, is not without some suggestions (in the *Autobiography*) that he is in conflict with the traditional theory of contradiction. Any suggestion of this sort must be repudiated. The contradictory or the negation of the proposition p is best and most simply stated as ' p is false', and is neither more nor less. The contradiction of the contradiction, or negation of the negation is simply ' p is true'. This form of statement, however, conceals the fact that ' p is false' is negative and indeterminate, cannot express any direct intuition, and must be a consequence of other positive and more determinate intuitions. The form ' S is P ' brings this out better. Where P is a determinate predicate, the contradictory has an indeterminate one, and is " S is anything incompatible with P ". Difficulties arise because, except in mathematics, we do not know *a priori* or with complete certainty which predicates are compatible with which. Is pain compatible with good, pleasure with evil, justice with mercy ? Is health compatible with disease ? As to the last question, with the qualification "in the same bodily organ, in the same respect, at the same time", it would appear not to be ; but otherwise apparently it is. A man with blistered feet may be otherwise perfectly healthy and yet able only to hobble along in great pain. Is ' S is pink' compatible with ' S is red' ? Yes, in so far as pink is a kind of red. No, in so far as pink is a very poor kind of red. We say ' S is red' is incompatible with ' S is green', but how do we know ? (see Mr. Russell's *Inquiry into Meaning and Truth*, p. 82). ' S is red' is found to be compatible with ' S is cold' because we happen to live in a world where there are cool red pigments, chemical compounds of no great stability. Suppose we had lived in a world where the only red things were red hot ?

Granted these obscurities about incompatibility, contradiction and negation, it is very important not to use them for concocting fallacies, as Hegel did in criticizing Kant. Kant had set himself to discover and state the limits of the faculty of understanding, assuming that a limit is that which cannot be transcended. Hegel made the comment that to state a limit is in principle to have already transcended it. Had he been right he would, of course, have shattered the whole of Kant's philosophy. To say "Stone walls do not a prison make, Nor iron bars a cage", is better poetry than logic. To say that, if there is something outside the reach of understanding, that something must really be known somehow, is neither poetry nor logic. It would imply that negation is not really negation but something milder, and it leads by natural stages to the doctrine that double negation has magic virtues not possessed by mere assertion. The criticism springs from just the kind of mistake that on his own theory Hegel should have avoided, namely mistaking imagination for thought and the abstract for the concrete. If you *imagine* a limit you are led invariably to *imagine* something beyond it because every part of space has something outside it. If you then abstract from the objects of imagination you arrive at Hegel's starting-point in his opposition to Kant.

In avoiding these fallacies there is no need to fall into the other of denying any doctrine that has an Hegelian flavour about it. In particular, there is the point emphasized by Professor Collingwood in his earlier books, *Speculum Mentis* and *Essay on Philosophical Method*, that all actual theories are inadequate and so far fallacious in some respects, though less fallacious than previous theories they have supplanted. Further, no error that has ever been seriously upheld is completely erroneous but always contains something of value. All this can be maintained without tampering with traditional logic provided we take into account the negative part of Professor Collingwood's theory, namely his attack on a common misunderstanding of the status of the proposition in logic. The proposition is a convenient abstraction based upon the structure of language, an indispensable but not always reliable guide. So far as logic deals with truth and error, it must deal with that which is capable of being asserted or denied. The proposition is represented by the smallest linguistic unit which can be asserted or denied. This much is necessary, but it is not necessary to go on to treat propositions as atomic. In the first place every proposition occurs in a context and owes part at least of its meaning and truth to that context. Professor Collingwood's theory of question and answer is intended t

describe the kind of context within which valid propositions occur. Even if his account were not correct it would still be the case that only propositional systems exist to be studied, and that single propositions are abstractions whose use is legitimate only as long as it is remembered from what they are abstracted and in what way. In the second place, propositions are complex and sometimes at least their logical properties and relations depend upon their internal structure as well as their external relations. Linguistic structure, though at times it conceals or distorts, has to be taken as capable of revealing logical structure, otherwise the study of logic would be impossible. For language is our sole medium. It can be supplemented by special technical symbols but it is necessary to introduce and interpret them. Nevertheless, linguistic structure is a fallible guide. The extreme linguistic simplicity of "Fire!" conceals considerable logical complexity; it is both an assertion and a command.

The doctrine that there are atomic intuitions, atomic truths, atomic propositions, assertions or judgments, and atomic sentences is open from the beginning to grave suspicion as being the revival under new terms of already abandoned theories. The first of these was the composition theory of knowledge sponsored by Descartes, that knowledge consists of discrete items which can be pulled apart and put together again. This theory was accepted by Locke, but quietly dropped when it became unmanageable. The second was the theory of association of ideas sponsored by Hume; later quietly dropped by him but taken up by others before being finally discredited. With this bad heredity logical atomism would have died long ago had it not been kept going by artificial respiration. It is to be hoped that Mr. Russell's difficulties in his recent book (*An Inquiry into Meaning and Truth*, pp. 314-317) will prove the *coup de grâce*. He assumes that unless a single observation by itself provides some information or knowledge, no number or series of observations can do so. This assumption is inevitable if it is supposed that single observations are atomic intuitions leading to atomic propositions and that all complex or non-atomic assertions are just aggregates of atomic propositions linked by 'and', 'or', or 'if—then'. But how could a single separate intuition, supposing there were such a thing, provide any information whatsoever? At least two experiences are needed to recognize a universal, to be able to say "Here it is again!". This is about the minimum for anything that could be called a proposition. To come to a more developed level of cognition, the minimum of observations that can be used by a physicist is two.

By one observation he finds that body X is at place P_0 at time T_0 , by another that it is at P_1 at T_1 . The two are the least needed to assign a velocity to X , assuming that the body found at P_0 , T_0 can be identified with that at P_1 , T_1 without additional observations. What it comes to is that empirical information is a function of a plurality of observations or intuitions in certain relations, not of single separate ones by themselves. Neither intuitions, truths nor propositions are to be treated as atomic. Whatever can be true, false, right or wrong must be complex and constitute a systematic whole. The whole may be analysable but not into absolute simples nor into separate units with the same determinate character they have as constituents of the whole. Truth is not a simple quality pertaining to simple entities as such, but a relation holding between or found among entities which form a system of a certain minimum complexity.

There is one further point to mention in this connection, or rather a different way of making the same point. The logical atomists assume that there are ultimate "rigid" or "hard" facts which are data of sense and of sense only without any accretion of thought. If there are facts which are "pliable" or "soft" they explain that as being due to their complexity and try to analyse them into hard facts. The view I would urge is the opposite; that there are no completely hard facts, but all are more or less soft. The wise man, of course, will seek out the hardest he can find, but he will not find them among the products of analysis of complex facts. Those fairly hard facts we rely on in daily life and those which form the basis of the empirical sciences are all complex and such hardness as they possess is due to their complexity. Simple, isolated, elementary data of sense are very soft indeed, except in the imagination of certain philosophers who write about them but have made no effort to experience them. So far as the data of sense have a determinate character that character is bound up with their context. Part of the context of human data consists of conceptual processes. There is no need to say more on this point as it is well discussed by Professor Blanshard in the early chapters of his recent book, *The Nature of Thought*.

Mr. Russell, in the Introduction to his *Inquiry into Meaning and Truth*, has put the general problem of empirical knowledge, which includes the problem of induction as usually stated, in the proper perspective by asking the question, "What is meant by empirical evidence for the truth of a proposition?" But he seems to expect to find particular elements of sense experience to correspond with certain elements of language. This expectation

cannot be fulfilled because two such disparate species do not *correspond*, and in any case these two factors are not enough by themselves. The relational system within which truth or falsehood is to be found is not simpler than a triadic system, as Mr. Russell himself once insisted (*The Problems of Philosophy*, pp. 195 *seq.*). Words correspond strictly only to words, thoughts to thoughts, sensations to sensations, things to things. Yet all are linked up together, by a linkage that can only be spoken of metaphorically, unless we call it simply the truth relation or the relation of transcendent reference.

The theory of question and answer attempts in answer to Mr. Russell's problem to specify the form which a propositional complex must take if it is to convey valid empirical knowledge. It may be summarized roughly as follows. Every proposition which contributes to knowledge is an answer to a question and the answer has been obtained because the question was asked. Every question arises out of pre-existing knowledge, which generally consists of propositions, themselves the answers to questions. In order to escape a vicious circle or an infinite regress we must in the end refer back to absolute presuppositions which are not themselves answers to questions. Absolute presuppositions, which should not be called propositions, must differ from relative presuppositions, which are propositions, in being neither true nor false in the sense that propositions are. This follows from the fact that we discover whether a proposition is true or false by asking questions. By hypothesis we cannot ask questions about absolute presuppositions (*Metaphysics*, pp. 21-48). I believe that in the matter of absolute presuppositions Professor Collingwood has allowed himself to be overawed by those fabulous monsters the Vicious Circle and the Infinite Regress into stating a valid theory in a misleading way. I believe we can and must ask questions about everything so that in that sense there are no absolute presuppositions, although there are presuppositions which are not true or false in the same way that ordinary propositions are. But more of this later.

According to Professor Collingwood's theory knowledge consists of propositional systems containing non-propositional elements. The proposition cannot be discarded because it is by definition that which is true or false. But it must be considered in its proper environment, without which it is a fish out of water. The first question to consider about his theory is whether it differs appreciably from the traditional theory of hypothesis and verification. The answer, I think, is that it is on similar lines but in so far as it is more general it is superior. A

hypothesis, in the sense of something suggested and awaiting verification or the opposite, is a question to which the answer Yes or No can be given under suitable conditions. If the answer is No another hypothesis has to be found, otherwise the subject matter remains blank, or rather it remains as a vague question instead of a precise one. But hypotheses to deserve the name must be general, of the nature of universal rules. A logic of hypothesis and verification applies only to those rather specialized and advanced branches of knowledge which deal in universal rules. Even so, in any branch of knowledge it does not cover those problems where the answers are particular or individual.

As a first illustration let us take the old one of the bag containing black and white marbles. Granted the assumption that it contains marbles (not beans, snails or anything else), that every marble is either black or white (not grey, green or any other colour), then if the bag contains n marbles we can ask: Are n white, none black? Or $n-1$ white, one black? Or $n-2$ white, 2 black? Or $n-3$ white, 3 black? . . . Or none white, n black? Usually only the first and last questions would be called hypotheses and possibly the suggestion that half are white, half black. If the prior assumptions are just as stated, there is no reason to prefer these two (or three) questions that imply a general rule to all the others that do not, unless of course there is only one marble in the bag. It is therefore best to put the problem in the most general form and not restrict the kind of questions asked.

It might be objected that hypotheses are not questions but supposals. The answer is that, if a hypothesis is by definition that which awaits verification or falsification, supposing, unless it is mere day dreaming, means asking the question "Is it true?" and trying to find an answer. A hypothesis in this sense is simply a question, but is given a special name because it is a special and important kind of question. The objection, if made, comes of confusing this use of the term hypothesis with the other, which means that which is presupposed or assumed for a special purpose (like the postulates of Euclid) though it is possible not to assume it or to conceive of other alternatives. This kind of hypothesis is supposed in the sense of being taken as if true and therefore not needing any verification.

The illustration of the bag of marbles is useful for another purpose. If our aim is to discover what the bag contains we can do so by inspecting its contents, the whole or a part, and by no other means. The assumptions mentioned and the questions listed are therefore superfluous as they have no bearing on the

method of inspecting the contents. All that needs to be known, and it must be discovered by inspection, is that the bag contains a plurality of separable, identifiable and numerable objects, not, for instance, treacle or dust. If it contains treacle or dust the method of inspection must differ from that devised for marbles or similar objects. But whether the contents are marbles or beans, or whatever colour they may be, inspection proceeds on the same lines. Of course any one expecting only black and white marbles might mistake dark blue ones for black. While anyone expecting some nearly black ones and setting out to distinguish them would not make that mistake. But prior information of this kind is relevant just because it bears upon the method of inspection.

Another thing that is wrong with the illustration is that the set of $n + 1$ questions, though it looks impressive, is of no use. Questions to be useful must not only be such as to determine methods of inspection, they must also be reasonably few in number so that they can be asked and answered one by one. At the end of the process it must be possible to conclude that these are all the questions and they have all been answered.

This futile illustration has been used deliberately because it is just the kind of illustration that has misled logicians into discussing bogus problems. It was, however, valid in the matter of the distinction between hypotheses and other types of question. This point can be taken a stage further. All problems of empirical knowledge are to begin with particular, singular or individual, of the form "What have we here?" or "What had we there?" The answer is of the form 'We have here a P' where P is a universal or universals. In the natural sciences the particular solution of the first stage may lead to generalization as a second stage, to an assertion of the form 'Every S is P'. But even in the sphere of the natural sciences much information remains at the first stage. This would hardly need saying but for the widespread tendency to despise anything not generalized. Thus even historians, who are officially supposed to deal with individual events and actions, have sometimes pretended that their real subject-matter was "forces", "movements", "tendencies" and so on, as though their science were a branch of mechanics.

That the primary problem of empirical knowledge is a problem depends upon the fact that experience is fragmentary and that we are compelled to try to stretch the fragments to cover the whole. The fragments, too, are selected and may not be a fair sample. The problem of generalization, perhaps better called the problem of determining the genus by consideration of its

species, is no more than a part, though an important one, of the whole problem. It is unfortunate that the bias of so many logicians in favour of mathematics and physics has led them to attend exclusively to generalization and even to special highly sophisticated forms of generalization. Professor Collingwood, as an archæologist, has a natural bias in the opposite direction which is a useful corrective. The primary question for empirical knowledge, let me repeat, is of the form "What have we here?" "Here" meaning not only what comes to us by processes outside our control but also what we deliberately set out to find. The tense of "have" should not exclude past or future. The formula covers the hunter's question, "What shall we have for dinner?" when he starts out; "What had we here?" when he finds yesterday's tracks on the ground, and "What have we here now?" when he hears a rustle in the undergrowth.

However, the best way of considering the problem is to consider it in terms of the process of sampling, of discovering the contents of the sack by examining a handful, as was done by C. S. Peirce (cf. *The Philosophy of Peirce*, ed. Buchler, 1940, pp. 174-217). Problems about bags of marbles are seemingly of the right form, but, except in the hands of Peirce, have been so tidied up for the convenience of mathematicians as to make them quite misleading. It must be emphasized that until the empirical problem has been solved and the solution generalized mathematical methods cannot be applied. I shall discuss the matter, therefore, in terms of an actual problem of difficult sampling. Had I understood the archæological technique of Professor Collingwood I could have used that for illustration. As I do not, I must refer to humbler spheres of investigation.

A works chemist is asked to determine the calorific value and ash content of a consignment of coal. The actual chemical operations are matters of routine. It is only the process of taking and preparing samples that is difficult. For what is needed in the laboratory is a pinch of finely powdered coal (or rather three pinches for three determinations) which should be representative of the whole bulk of material standing in the sidings in perhaps fifty trucks. The coal in the trucks consists of pieces of various sizes which may be as large as a fair-sized dog or smaller than a flea. The dust and small fragments will probably differ considerably from the larger pieces because certain coal constituents disintegrate more readily than others. The dust tends to contain more ash and have a lower calorific value. There may be stones present which have no calorific value at all, and various other impurities may be present, unevenly distributed. It is not even

safe to assume that large pieces and medium-sized pieces are of similar composition. Besides all this there is the problem of moisture. The coal in the seam contains some moisture, which it tends to lose on exposure to the air. On the other hand, if there has been a shower of rain the top layer of coal in the trucks will be wet. If there has been heavy rain followed by sun the top layer will be dry, the rest wet, the dust very wet and mostly washed down to the bottom of the trucks. The chemist can simplify his problem by drying all his samples thoroughly; but then they are not representative of what goes into the furnaces, even if they are representative of what left the pit. For the whole contents of the truck go in, wet or dry, and moisture makes a considerable difference to calorific value. He should be able to include a "representative" amount of moisture in his samples, or to exclude it according to requirements.

If the sampling problem is to be solved satisfactorily the chemist must know exactly what it is that is required of him, and he must use his prior knowledge in order to frame the proper questions to determine his procedure. The prior knowledge will consist of his knowledge of the nature of coal in general and of this consignment in particular. For instance, has the consignment all come from one seam in one pit? If so it will be fairly uniform from truck to truck and only a few need be sampled. If it comes from different pits it will be advisable to analyse material from different lots separately. The results can be aggregated and averaged afterwards. Clearly, however, if colliery A delivers 100 tons of coal of a calorific value 15 per cent. less than the 200 tons from colliery B, it would be a mistake to mix samples from the two before analysis. Another question to ask is whether the coal has been washed, picked and screened, or not. If it has, there will be very little dust (unless it is the smallest size delivered), very few stones, and the pieces will be roughly the same size. In that case the material will be reasonably uniform and sampling easy. It will be enough to select a dozen or so pieces (or fragments of pieces) from different levels in the trucks and grind them all up together. After careful and repeated mixing of all the powder a little can be taken for test. If the material is less uniform and a large number of pieces have to be taken there may be more than can be conveniently ground up all together. In that case the pieces must be coarsely ground separately, the total product well mixed and a portion taken for final fine grinding.

Of course, what I have said may exaggerate the difficulties. Usually no very high degree of accuracy in the determinations is called for because coal is not weighed out very accurately for

purposes of buying and selling nor for stoking the furnaces. What is mainly of interest is not to know the absolute calorific value but to see that it does not vary greatly, or if it does vary, to know how much. Any efforts that are made or omitted in reducing sampling errors depend upon the final result aimed at. For one purpose sufficient accuracy may be attainable by a quick and easy method, for another a more elaborate and troublesome method may be needed. In case of doubt or special difficulty a systematic examination of the variability of the material will have to be undertaken. For example, separate specimens may be taken from different large pieces of coal, middle sized and small pieces, and dust, and then all these separately examined to see how much they differ. It may be necessary to examine exhaustively several tons of raw coal to discover how much of it consists of material of different sizes and how much it breaks down in handling. Then, as the result of this investigation, a definite sampling system can be devised, so that correct percentages of the sample shall come from big pieces, from smaller ones, and so on.

If any method of sampling is criticized as inaccurate or misleading it can only be in terms of some alternative method which shows itself to be better or by analogy from experience of sampling some other kind of material. If my knowledge of something is strictly confined to taking and examining such and such samples by a certain method then that is the whole of my knowledge for good or ill. I cannot criticize it unless I acquire other knowledge of some kind to bring to bear on the problem. If some character of the material remains latent whatever methods of examination are used, it is permanently latent and therefore negligible. If it was latent during a first investigation and then appeared during a second one, that must have been because of a significant change of method, and the difference between the two results is a genuine revelation of the character of the material.

There is one last point to be noted at this stage. The result of examining a specimen of any material states no general law in the usual sense of the term. It merely states that *this* lot of coal has been found to have such a calorific value. It might be called a statement of the character of a complex event, or even (*pace* Professor Collingwood) a historical statement. It is, however, a generalization in a perfectly definite sense in so far as it claims that *any* correctly devised examination would give the same result within specified limits of error, and contradicts any assertion of a different result. One assertion about a pure particular (if there be such a thing) cannot contradict another

similar assertion, because the subjects of the two must be different.

There is a question that cannot be entirely avoided at this stage, though it is a side issue, since some logicians have tried to make it the main issue. What is the bearing on this subject of the mathematical theory of error? Every measurement is subject to variation or error. That is to say successive determinations, however much we strive to keep all conditions similar, give slightly different results. The greater the effort to keep conditions constant the less the error, as a rule, but some error or variability remains none the less. Suppose three determinations of some kind have been made. The actual values found are X_1 , X_2 , X_3 , with, say, 2 per cent. difference between the smallest and the largest. Now, given that method and those circumstances the true, real, precise, exact result is X_1 , X_2 , X_3 ; just these values and nothing else. It is customary (and useful) to take the arithmetic mean of these, X_m , and return that as the result. It is often supposed that X_m is somehow more true, real, precise, etc., than X_1 , X_2 , X_3 , severally or collectively. This comes from the notion that the process of measurement is like firing at a target, so that although the actual individual determinations are only inners and magpies the mean somehow hits the bull's-eye. The analogy of a target is misleading unless we suppose the target to be an infinite uniform surface and the bull's-eye invisible to the marker, though seen from the firing point. It is quite true that the mean will be central to the values of which it is the mean, but we (as markers) do not know whether the bull's-eye is between the actual hits or not or whether there is a bull's-eye. The mean is a useful arithmetical dodge for handling one number instead of several, and for purposes of generalization one number is needed. Its claim to greater truth, reality, etc., is that if a large number of similar fresh determinations are made the arithmetic mean of these will probably be closer to X_m than to X_1 , X_2 , or X_3 . There is, in fact, a kind of stability about the arithmetic mean which is not possessed by the individual values and to some extent justifies popular belief. This stability, of course, is shared by other kinds of average, but the arithmetic mean enjoys the great advantage of being easy to calculate.

Now when a very large number of values has to be dealt with, particularly if they are rather discordant, it is customary to carry out more elaborate arithmetical calculations in accordance with the calculus of errors. These are extremely useful, but like the simple process of taking arithmetic means are dodges for handling conveniently otherwise unwieldy groups. The calculus of errors

must not be supposed to have magic properties whereby it conjures knowledge out of ignorance. There is, however, an important difference between the two types of case. By simple direct inspection of a small concordant group of figures we can "see" without calculation what it is they signify and can "see" that the arithmetic mean (or some other mean or average) is fitted to stand for them and be used instead of them. Direct inspection of a large or discordant group produces no similar intuition. Hence the need for the calculus of errors and hence the belief that it has conjured up information on its own.

Finally, the theory of the calculus of errors is part of the general mathematical theory of probability. This theory is therefore supposed to hold the key to the mystery of the problems of empirical knowledge. As the mathematical theory cannot be applied to empirical problems until the work of inductive generalization has already been done and assumed to be legitimate, it is not of primary importance for the empirical problem. If there is a mystery, the key to it is not there.

To return to our proper subject. The question asked was "How do we know the sample is representative of the bulk of the material?" The answer is "Because we have adopted a method of sampling designed to extract the information required". If there is something we desire to know that is not revealed in the samples the sampling has been done wrong and must be done again in a different way. If it has revealed what was required it has done all that can be expected. The method was determined by two things, our purpose and our prior knowledge. Purpose itself is largely dependent on prior knowledge. It is only because we know something that we can guess there is still something more to be known. Prior knowledge is of two sorts, general knowledge of the kind of material dealt with and particular knowledge of the specimen under examination. The only prior knowledge which is relevant is that which determines the method of examination. The question, "What have we here?" is closely bound up with the question, "What are we going to do about it?"

So far what I have said is in agreement (I believe) with Professor Collingwood's statement in terms of question and answer. But after this point his statements about absolute presuppositions seem to me rather misleading. It is quite true (and important) that precise knowledge comes of asking precise questions and in no other way, but the prior knowledge out of which those questions arose may have been, and often was, less precise. It in turn may have been, and often was, the outcome

of vaguer questions, and these of vaguer knowledge, and so on, till we get back to initial questions extremely vague and extremely numerous that are hardly more than a reiterated "What have we here?" Although precise and scientifically valuable experience has to be sought out deliberately by means of precise questions, primitive experience is to some extent flung at us willy nilly with a minimum of questioning and of presupposition.

There are, of course, absolute presuppositions implied in any kind of experience, but are they not of the type of the Kantian categories? These are not exactly of the nature of assertions. Perhaps it is right to say that they are neither true nor false in so far as truth and falsehood require some empirical content to be true or false about. By hypothesis a pure category has no empirical content. However, granted the categories, the quite vague question, "What have we here?" can be turned into a number (twelve in all if Kant is right) of less vague questions. One of these questions is "What is its cause?" We may fail to discover a cause, but we do not therefore accuse the category of cause of being false nor should we judge it true just because we find one. If we fail to find the cause of anything we have to be content to say the cause is unknown. To put the matter the other way round, until we find the cause of a thing our knowledge of it is incomplete, therefore we are bound to look for a cause. The categories tell us the kind of question to ask but not the answer, nor whether there will be an answer at all. The doubt about the categories is whether the list is complete and whether the items are properly formulated. Do they cover all possible knowledge or merely the knowledge we or Kant happen to possess at the time? We can test them in terms of those methods which have been tried and have been successful. We can never be sure that all possible methods have already been tried. In fact, we can be fairly sure they have not. This, I would suggest, is the amount of truth there is in the doctrine of historical relativity put forward by Professor Collingwood (*Metaphysics*, pp. 49-77. The discussion in the *Essay on Philosophical Method*, pp. 190 seq., and specially pp. 194-195, seems to me much better). I would certainly challenge the suggestion, if he really meant it, that we cannot criticize or suggest amendments to the absolute presuppositions of knowledge but only state as a matter of historical fact that A knew so and so and therefore presupposed such and such while B knew something else, and therefore presupposed something different. In so far as A and B had valid knowledge it was because they used methods adequate to their purpose. If their purposes were different, their methods may have been

different. So far as actual knowledge goes, namely what has been acquired from the time of Thales to the present day, I would suggest that the purposes and methods of all investigations have been closely similar, and therefore the presuppositions similar and perhaps exactly the same. It is quite true that different questions are asked at different times, but only because different stages in the growth of knowledge have been reached and the old questions have been answered, at least in part. Even so, the questions differ as species of the same genus differ, the new questions bear a strong family resemblance to the old ones.

The principle by means of which Kant justifies the categories is that, if anything is universally true of all experience, it must be something involved in the conditions under which any experience whatever is obtained. As Peirce pointed out (*Philosophy of Peirce*, pp. 187-189) this principle is equally applicable to special experiences. If there is any valid general rule or any justification for extension in thought beyond the range of the immediately present to be found in any part of experience, *that* rule must be something involved in the conditions under which *that* experience is obtained. The method determines the rule. The question asked or the end sought determines the method. If in any one case the rule fails, then the particular method used in that case was at fault. If the method was at fault either no specific question was put, or the wrong question for that case, or the implications of the question were not adequately pursued. Each case has to be judged on its own merits, not in terms of a general formula; yet each case displays a specific variant of a generic principle and the generic principle is universally applicable.

On the basis of this discussion, I think it can be seen why, although we can say that such and such an inductive generalization is highly probable, we can never find a valid method for assigning a numerical value to its probability. As the argument is too long to set out fully here, it must suffice to throw out a hint. In order to assign numerical values to the probability of events that have not happened or are not yet known, certain general and arbitrary assumptions have to be made which have no relevance to the special questions and special methods which should be employed to investigate those events. Therefore the result of the calculation is either fallacious in principle or itself merely probable. For instance, a numerical probability can be assigned to the death next year of any member of a given group of people, on the assumption that in certain respects the future will exactly resemble the past. But if experience teaches any-

thing it is that the future is very seldom exactly the same as the past in any respect. In other words, we can never say "It is certain that on the known data the probability of future events of class E is N", but only "It is probable that on the known data the probability of future events of class E is N". If N stands for a number, the probability of which it is a probability cannot have a number assigned to it.

The foregoing account of absolute presuppositions is different from Professor Collingwood's. He might accept it as a partial account, as there must be rules of method, and they must be presupposed and *a priori* in Kant's sense. But are they metaphysical first principles, and, if they are, are they the only ones? Professor Collingwood seems to put forward material, as opposed to purely formal, principles. The difficulty is that any proposition which asserts the existence of anything or that anything existing has a determinate character can be denied without self-contradiction, and generally has been denied by somebody with some degree of plausibility. If it is asserted, it has to be defended on grounds of probability in the face of alternatives whose probability is not always negligible. It must be defended, too, on grounds which are empirical in the wide sense of the term. This may seem a curious predicament for metaphysical first principles but, as far as I can see, cannot be avoided. I doubt whether Professor Collingwood's method is a possible one. He says, in effect, that metaphysical first principles are not of the form '*p*' but of the form 'A asserts *p*'. But if *p* is asserted at second hand it can equally be denied at second-hand 'B denies *p*'. Sauce for the metaphysical goose is sauce for the metaphysical gander. In any case we are brought back to ask, "Is *p* true?" otherwise there is no interest in what A or B said about it. I doubt, too, whether the argument of his *Metaphysics* is compatible with that of his *Essay on Philosophical Method*.

There are two other difficulties to be mentioned by way of conclusion. They turn on the relations of question and answer. First, is it impossible for the same proposition to be the answer to different questions? If questions could always be formed so that the answer was 'Yes' or 'No' it would be impossible. But can they? Secondly, not all questions can be answered unequivocally. The answer may have to be "In some circumstances 'Yes', in others 'No', in others still no answer can be given". Or it may be "Granted these presuppositions 'Yes', granted those 'No', granted others no answer can be given". Incomplete knowledge is liable to rest at this stage, and while it does it is possible to doubt whether any presuppositions are absolute in any sense.

III.—DISCUSSIONS.

DISINTERESTED DESIRES.

IN asking whether there are any disinterested desires, I am defining a disinterested desire as one whose object is something other than a future state of the person desiring. This is not quite the same question as the question whether there are any disinterested actions, for there might be disinterested desires, and yet they might never be strong enough to move to action unless supported by interested desires. But I prefer to discuss the question in terms of desires, because the only plausible arguments I know against the existence of disinterestedness are arguments against the existence of disinterested desires, and it is hard to imagine what kind of grounds there could be for holding that a certain class of desires was by its nature incapable of leading to action unless aided by desires of a different class. Broad discusses the question in terms of disinterested actions, but it is possible to compare his usage with that adopted here, since he defines a disinterested action as one "not done with the motive of maximizing one's own happiness on the whole" (*Five Types of Ethical Theory*, p. 71). Thus a disinterested desire is one that affords the motive for a disinterested action. But the two usages, though comparable, are not identical for the following reason: even an action that was not done with the motive of maximizing a man's happiness on the whole might be motivated by some desire for a future state of the agent, though that state was not the agent's greatest happiness. I propose to distinguish between Broad's sense of "disinterested" and my own by using the term Psychological Egoism to describe the denial that there are any disinterested desires in my sense, and the term Psychological Eudaemonism to describe the denial that there are any in Broad's sense. The relation between the two theories is that Psychological Eudaemonism implies, though it is not implied by, Psychological Egoism.

Since Bishop Butler is commonly thought of as having refuted Psychological Egoism, I shall discuss his attempted refutation, and having tried to show its inadequacy, I shall inquire into the reasons for maintaining Psychological Egoism, and examine them in the light of an independent analysis of the nature of desire.

I begin by quoting a well-known passage in which Butler establishes beyond question the existence of disinterestedness in a certain sense of the word. In Sermon 11 (Selby-Bigge's *British Moralists*, Section 231) he says: "Happiness or satisfaction consists only in the enjoyment of those objects which are by nature suited to our

several particular appetites, passions, and affections. So that if self-love wholly engrosses us, and leaves no room for any other principle, there can be absolutely no such thing as happiness, or enjoyment of any kind whatever; since happiness consists in the gratification of particular passions, which supposes the having of them. Self-love, then, does not constitute *this* or *that* to be our interest or good; but, our interest or good being constituted by nature and supposed, self-love only puts us upon obtaining and securing it." Cf. Preface (*British Moralists*, Section 199): "Take away these affections, and you leave self-love absolutely nothing at all to employ itself about".

What Butler has shown here is that the notions of self-love and its object, happiness, are reflective ones which must derive their matter from a set of primary desires. But this, though important, is not enough to prove the existence of disinterested desires in the sense in which the expression is used in this paper, and indeed it may be doubted whether it is even enough to refute the doctrine of Psychological Hedonism against which Butler's attacks were more specifically directed (see the note at the end of this paper). Take, for instance, Butler's own example of the desire for food. The question which concerns us is whether reflective beings have disinterested desires. Desires that are on the level of mere blind impulse are no doubt *non-interested*, but what we want to know is whether beings admittedly capable of interested desires are also capable of disinterested ones. The desire for food of a reflective being might reasonably be treated as a desire for a future state of that being, *viz.* that of being adequately fed. Indeed, it is not easy to see how *else* it could be treated except as a desire for an *action*, and such a desire seems to be on the border-line between the interested and the disinterested: its object is not a *state*, strictly speaking, of the desirer, but it is an event in his personal history.

Moreover, there is at least one passage in Butler which seems to express the particular form of Psychological Egoism that I have called Psychological Eudaemonism: "It is manifest that nothing can be of consequence to mankind or any creature, but happiness" (Sermon 12: *British Moralists*, Section 241). Such a passage as this should be compared with others where Butler seems to be maintaining Ethical Eudaemonism, notably with the famous assertion that "when we sit down in a cool hour, we can neither justify to ourselves this or any other pursuit till we are convinced that it will be for our happiness, or at least not contrary to it". I do not believe that Broad can be right in interpreting this as a "hypothetical concession" (*op. cit.*, p. 80). On the contrary, I think that Henry Sidgwick was perfectly justified in claiming the support of Butler for his view that "a man's own happiness is an end which it is irrational for him to sacrifice to any other" (*Methods of Ethics*, ed. 7, p. 496). I am not going to discuss this view, but I have mentioned it because I think it is linked up with the expression of

Psychological Eudaemonism quoted above : Butler's general position, put very roughly, seems to be that we "really" all want happiness and in the long run nothing else, and that consequently it is our duty to bring what may be called our "actual" desires into accord with the "real" ones determined for us by nature. This is a view which has reputable, indeed Platonic, backing ; but, and this is the point which concerns me at the moment, the result of it is to make Butler a rather uncertain ally in the task of showing that we have, in fact, some desires that are disinterested.

Before leaving Butler, I should like, rather parenthetically, to insert two references, the one to the full discussion of the "cool hour" passage in Prichard's *Duty and Interest*, pp. 22-24, and the other to a sentence in Swift's Letter to a Young Gentleman, "that it seems to be in the Power of a reasonable Clergyman, if he will be at the Pains, to make the most ignorant Man comprehend what is his Duty, and to convince him by Argument drawn to the Level of his Understanding, that he ought to perform it" (*Nonesuch Selection from Swift*, p. 407). Here "ought" is clearly used as Prichard contends that $\delta\epsilon\iota$ habitually is in the *Republic*, in a non-moral sense, and the task which Swift sets to his young gentleman corresponds very closely to that which Butler in fact undertakes in his Sermons.

The inadequacy of Butler's refutation of Psychological Egoism, and the uncertainty as to what his view in the last instance actually is, point to the desirability of examining more closely the grounds for holding Psychological Egoism, and of analysing the nature of desire itself.

Psychological Egoism arises, I believe, from such reflections as these. It is of the essence of a desire to be for the realization of something not yet in existence, and this realization is thought of as being identical with the satisfaction of the desire. A desire must look to its own satisfaction, and this satisfaction is something that is enjoyed by the desirer. It is this notion of satisfaction and its relation to desire that has to be analysed if we are to refute Psychological Egoism, and Butler here offers us no help. Rather he tends to obscure the problem by taking as examples of disinterested desires what are more properly mere impulses or urges such as the desire for food.

It is true that Butler also appeals to clearer examples of disinterested behaviour. This is seen in his treatment of benevolence. For he drives home his point especially by reference to desires which we are not in a position to realize by our own action. "Is there not often the appearance of one man's wishing that good to another, which he knows himself unable to procure him ; and rejoicing in it, though bestowed by a third person ?" (Sermon 1 : *British Moralists*, Section 204, note). But such an example has two drawbacks. In the first place, "wishing good to a man" is not strictly speaking a form of desire, and in the second place it is not clear how the

satisfaction that any desire looks to is in such cases related to the object of the desire; for obviously the good of another cannot *be* our satisfaction, even where it is, as Butler here says, that "in which" we rejoice.

But this very example of Butler's, though at first sight it creates difficulties, points the way to a clearer view of the situation. I have said that "wishing a man good" is not the same thing as desiring; but in fact Butler's instinct in shifting the discussion to this fresh ground is a sound one. He is pointing to a state of consciousness exemplified, as he recognizes, both in our attitude towards the prospect of future good for others, and in our attitude towards their existing good or well-being. This state may be generally described as "taking an interest", though the description is rather paradoxical, since it is this state that we are pointing to precisely as that which is characterized by disinterestedness; and in fact the phrase "a disinterested interest" is sometimes used to describe the state in question.

If, then, leaving over the analysis of desire in particular till later, we concentrate on the notion of interest, and ask what it is that we are interested *in*, what is the *object* of our interest, the only answer possible is simply that, in such cases as Butler is referring to in the passage under discussion, it is the good of some other person. This can perhaps be made still clearer by comparing the two possible situations to which Butler refers in the sentence quoted. In the first we are thinking of the as yet non-existent good of someone and, as Butler puts it, "wishing it to him". In the second we are thinking of that good as already existing and "rejoicing in it". Now if, as is surely the case, those are both cases of "taking an interest", and both have the same object, that object can only be "the good of so-and-so". It cannot be, as the Psychological Egoist might argue on the strength of the second instance alone, our own contemplation of the other's good: once we have isolated the "taking an interest" as the element common to the two cases, we can see that the wishing in the one case and the joyful contemplation in the other are attitudes distinguishable from, and grounded in, the one identical interest. The difference arises from the fact that in the one case we think of the state of affairs in which we take the interest as unrealized, in the other as realized. But this difference does not affect the interest as such.

Bearing in mind this account of interest, we can now return to the analysis of desire and see how the assertion that disinterested desires are possible can be reconciled with the fact that every desire, as was said, "looks to" its own satisfaction, which satisfaction can only be a state of the person desiring. The principle of the solution lies in recognizing that the object of a desire, as of any interest, is quite distinct from the satisfaction which accompanies the thought that the object has been realized. *What we desire*, or, the object of our desire, is, let us say, "that X should be happy". Then that desire

is realized by the happiness of X, but it is satisfied by our thought that X is happy. It is clear that realization can exist without satisfaction (if we are not aware of the realization), and satisfaction without realization (if we mistakenly believe realization to have taken place). It may be thought a paradox that we can continue to desire what already exists, through mistakenly believing that it does not exist. Psychological Egoism, it is true, has the advantage of avoiding this paradox, since we can hardly believe existent states of our own to be non-existent, not, at least, in any sense relevant to this discussion. But the paradox is one which disappears when the necessary distinctions are made.

It remains to say something about what differentiates desire from the wider notion of interest. The first notable difference is that while we can be interested in any sort of state of affairs, irrespective of whether we believe it to be in existence or not, we only desire what we believe to be not yet in existence. (Hence, as I have suggested, the superficial difficulties about desires for what is, in fact, in existence though believed not to be.) Interest, in fact, manifests itself as desire when directed on a state of affairs known or believed not to be in existence, as complacency¹ when directed on a state of affairs known or believed to be in existence. There is a further distinction to be made between desire, which is directed on that which is thought of as possible, and wish, which may be for what is recognized as impossible.

This distinction between desire and wish is of some importance for the next point to be raised, for it seems to lie in the fact that desire, in contrast to wish, is incipient action. And the next question is whether desire is, as some have held, always for action; whether, that is, the object of desire is always an action. This view seems to be held by Broad when he says: "the object of an impulse is never, strictly speaking, a thing or person; it is always to change or preserve some state of a thing or person" (*Five Types of Ethical Theory*, p. 67). Broad here talks of impulses, and Butler also habitually uses such words as "impulses", "affections", "movements", which naturally point to an action as their object. But this will not do as a general account of the nature of desire, for there are some cases at least in which the action is only the means to an end. It might be said that, if desire is "incipient action", the object of desire is always action, but sometimes as a means and sometimes as an end. But this would be a loose way of talking, for when we ask what the object of a desire is, we want to know what is desired *for its own sake*; and to say that we always desire to do some action, but sometimes as a means and sometimes as an end, is equivalent to

¹ I use this word in preference to satisfaction or gratification, because they include a reference to antecedent desire; to pleasure, because I think pleasure can exist in the absence of (at least conscious) interest in any object.

saying that the object of desire is sometimes an action and sometimes something to which an action is a means.¹

It is now time to gather together the threads of my argument, and to set forth the relation between the various notions I have been discussing. It will be convenient to arrange them in an order of increasing specificity. The widest notion is that of interest, which can be directed on any state of affairs, whether thought of as past, present or future. More specific is wish, which can only be directed on that which is thought of as non-existent, though still the object of wish can stand in any time-relation to the present: we can wish that something *had been* the case, or that it *were* the case now, as well as that it *should be* the case in the future. Desire takes its place as a special form of wish for the future. Take any future state of affairs which we desire. Simply as a state of affairs, we have an interest in it; as a state of affairs we think of as non-existent, we have a wish for it; in order that all the conditions for an actual desire may be fulfilled, it is further necessary that we should think of the state as a possible one which we can help to make actual. This further thought gives rise to the *impulse* which is necessary in order to convert a mere wish into an actual desire. I do not mean that the impulse is just something added to the pre-existing interest and wish—on the contrary, as I have said earlier, impulse in itself belongs to a more primitive stage than conscious desire; but my purpose here is analysis and not psychological history. The object of the impulse, considered as a separate element in the total situation is always some action, but the object of the desiring consciousness as a whole, that which is desired for its own sake, though it may sometimes be an action and nothing else, is certainly very often something to which the action is merely a means, and is identical with that in which the desirer has an interest; and this is by no means necessarily a state of his own.

To use the word "desire" in this way involves treating the instance in Butler from which I started (*British Moralists*, Section 204, note) as a case of wish rather than of desire, but that does not affect the main point, for once the existence of "disinterested interests" is recognized the differences of wish and desire are a matter of detail.

It will be suitable to end by returning to the contrast between realization and satisfaction which forms a crucial part of my argument. Though they are, as I have said, always distinguishable, the distinction is sometimes a distinction without a difference. This is so in those special cases which the Psychological Egoists have held to be universal, those in which the object of desire is some future

¹ The loose way of talking I am objecting to is specially common in the contrast which is drawn between what is "good as a means" and what is "good as an end". The contrast is really that between what is (simply) good and what is a means to good. I owe the recognition of this to the lectures of Professor Prichard, who has shown how the inaccurate way of stating the contrast has led various writers astray.

state of our own. Here the object of the desire is the experience, so that what realizes it is the existence of the experience, while what satisfies it is the consciousness of the experience. The reason why this is a distinction without a difference is that the mode of existence of an experience is someone's being conscious of it. This "distinction of reason" rests on its own evidence, but it is fortunately possible to bring it home by pointing to cases in which there is a difference as well as a distinction, namely those in which the object of desire is not a future experience of the desirer.

My conclusion is that Butler's defence of disinterestedness is substantially sound, in spite of the gaps and flaws in his argument. What satisfies a desire is not the same as the object of the desire except in the case of desires for future states of our own, and there it is for special reasons which arise from the nature of the situation. The mistake that many have made is to treat this exceptional case as typical, and to attempt to bring into line with it all the other cases in which on the face of it the object of the desire is simply a state of affairs to be brought about, and the satisfaction something quite different, namely the thought that this state has been brought about. It is true that as Butler says: "all particular affections . . . equally tend to a course of action for their own gratification" (Sermon 11: *British Moralists*, Section 234). But the gratification (*i.e.* what I have called satisfaction) is the emotional aspect of the thought that the object of the desire has come into existence: it is not itself the object of the desire.

NOTE.—Psychological Egoism in the sense in which the expression is used in this paper is the generic doctrine of which Psychological Eudaemonism and Psychological Hedonism are species. I have tried to show the inadequacy of Butler's refutation of the generic doctrine and of Psychological Eudaemonism. In this note I shall consider his treatment of Psychological Hedonism. According to Butler: "That all particular appetites and passions are towards *external things themselves*, distinct from the *pleasure arising from them*, is manifest from hence; that there could not be this pleasure, were it not for that prior suitableness between the object and the passion" (Sermon 11: *British Moralists*, Section 229). On this Henry Sidgwick comments: "Many pleasures occur to me without any perceptible relation to previous desires, and it seems quite *conceivable* that our primary desires might be entirely directed towards such pleasures as these" (*Methods of Ethics*, ed. 6, p. 45). This is a sound criticism. It does not matter that Butler is, in fact, right in rejecting Psychological Hedonism, for his argument claims to be demonstrative, and he apparently regards as equivalent the true contention that self-love presupposes particular primary desires and the false one that desire for pleasure presupposes an independent desire for the object causing the pleasure. His vague phrase that there must be a prior suitableness between the object and the passion can be defended only at the cost of treating it as a tautology, *viz.* that pleasure cannot

arise from the enjoyment of an object unless that object has the capacity for exciting pleasure. But when this has been said, it is only fair to emphasize that the situation Sidgwick imagines, though conceivable, and not proved by Butler to be impossible, is far removed from actual fact. For few of our primary desires, probably none of the most primitive ones, depend on the prior experience of pleasure arising from their objects. And even a single instance of a desire, for an object from which we have not previously received pleasure, and from which we do not on inductive grounds expect pleasure, is sufficient to refute Psychological Hedonism, which is, in fact, as unpalatable a species of the generic doctrine of Psychological Egoism as could well be imagined.

J. C. MAXWELL.

ARE CONTRADICTIONS EMBRACING ?

(A) Under the title *Does a Contradiction Entail Every Proposition?* (MIND, 51, p. 90) Mr. Harold Jeffreys writes that he was 'satisfied at first, but on further thought . . . again doubtful', when considering my affirmative answer to this question (sketched, in a non-technical paper, in MIND, 49, pp. 403 ff. *Cp.* also the historical references to Lukasiewicz and Duns Scotus, made in MIND, 50, p. 312). Mr. Jeffreys' doubt appears to be due to the following consideration. He believes (a) that the very argument used to show that every sentence can be inferred from a contradiction *assumes* the inadmissibility of some (or the same) contradiction; and (b) that this way of arguing is circular. Before re-analysing my argument in order to show that I did not make the alleged assumption, I should like to mention that even if I had, my argument would not be circular, so far as Mr. Jeffreys' problem is concerned. For there may be people who are prepared to grant the falsity or inadmissibility of contradictions, but who are not satisfied that every contradiction must be *embracing*, i.e. that every sentence can be inferred from it. (In fact, this attitude is precisely Mr. Jeffreys', if I am not mistaken.) In other words, even if I were to admit (a), or in Mr. Jeffreys' words, that the denial of 'the possibility that *p* and *not-p* can both be true . . . assumes that the system does not contain the contradiction . . .', even then I would only assume that the contradiction is false, not that it is embracing; so that the argument would not be circular.

However, I really tried in my paper to show more than the 'embracingness' of contradictions. I aimed also at showing that the embracing character of contradictions is a *practical* reason for not admitting them. This further aim could not be realized if (a) had to be granted, i.e. if we had to *assume* the inadmissibility of contradictions, in order to show that they are embracing. In connection with this aim, Mr. Jeffreys would indeed be right in believing that (b) follows from (a), i.e. my argument would indeed be circular, if I had made the assumption (a). But I do not agree with Mr. Jeffreys that I have made it, or that I have to make it.

Mr. Jeffreys' argument appears to be this. I postulated in my paper two *rules of inference*:

(1) From any given premise, a conclusion can be drawn which is a disjunction containing the premise as one component and any sentence whatsoever as its second component.

(2) From two premises of which the first is a disjunction, and the second the negation of one component of that disjunction,

the second component of that disjunction can be drawn as a conclusion.

Nothing beyond these two rules need be assumed in my proof. Mr. Jeffreys argues, however, that (2) implicitly assumes that a sentence and its negation cannot both be true; and he can point to a statement in my paper (the last on p. 409) which seems to admit that this assumption is implied. But this is a misunderstanding. In logic, as well as in mathematics, we must always clearly distinguish between the formal trend of the argument and the personal intuitive procedure by which we try to 'grasp' it. For instance, we can build up a system of Geometry in a strictly deductive way, without the use of illustrative *diagrams*, but few people would intuitively 'grasp' such a system without using them, privately, as it were. It is only in this illustrative way that (2) 'assumes' the inadmissibility of contradictions. In order to convince those who are reluctant to admit (2) I argued *ad hominem*: 'The first premise, being a disjunction, maintains that at least one of its components is true. The second premise, being the *negation* of one of the components, *maintains that this component cannot be the true one*; therefore, the other must be true.' This 'argument' indeed makes use of the intuition that a sentence and its negation cannot both be true. But it is only an illustration; like the illustrative diagrams, it cannot prove anything at all. Our rule (2) is not deducible from, or replaceable by, the assumption that a sentence and its negation cannot both be true (*i.e.* the so-called Law of Contradiction). Nor does it imply this assumption. In fact, so little is needed to show the embracingness and thereby the practical uselessness of contradictory premises, that we can, if we like, proceed in our construction of a system of logic in the following way: we can first assume a *rudimentary system* of the 'calculus of propositions' which is so incomplete, or *logically weak*, that it is part of practically all logical systems, and that the so-called laws of contradiction, excluded middle, identity, and double negation, as formulated within the calculus of propositions, can be proved to be entirely *independent* of it. With the help of this rudimentary system, we can next establish the embracingness and uselessness of contradictions. (And only after having done this, do we proceed, if we wish, to strengthen our system, until all non-embracing formulæ are deducible; thus we may add next, for instance, the 'law of contradictions'.) To prove that this is possible, I enter into some technicalities.

(B) Our two rules of inference (1) and (2) must *not* be taken, of course, as *formulæ of a propositional calculus*. But they can be replaced by certain formulæ (of the system of Material Implication). (2) would have to be replaced by the formula (2'), and by the 'Principle of Inference' (*cp.* PM, *i.e.* *Principia Mathematica* 1-1; LL, *i.e.* Lewis-Langford, p. 126, and 14-29, which enables us to carry out all proofs here needed also within a *System of Strict Implication* or *Entailment*; *cp.* also LL 19-72). The rule (1) can be

replaced by the formula (1'). We thus arrive at a rudimentary system consisting of the primitive formulæ (1') and (2'):

$$\begin{array}{ll} (1') & p \supset (p \vee q) \\ (2') & (p \vee q) \supset (\sim p \supset q) \end{array}$$

(1') is identical with PM 2.2; (2') with PM 2.53. The two formulæ (1'), (2') constitute a system sufficient to prove the embracingness of any 'pair of contradictory sentences', i.e. any two formulæ of which one is the negation of the other.

By combining (1') with (2'), we can eliminate the disjunction. We thus obtain another example of a rudimentary system with the same property, namely the single primitive formulæ

$$(PM\ 2.24) \quad 'p \supset (\sim p \supset q)'$$

which is also Carnap's PSIII, and corresponds to his PSII. (Carnap's PSII is not, as Mr. Jeffreys says, ' $\sim p \supset (p \supset q)$ ', i.e. (PM 2.21), which has, however, analogous properties. It is important to note that *none* of these formulæ can be said to be objectionable or 'drastic' as Mr. Jeffreys suggests; not even from the standpoint of a theory of Strict Implication or Entailment, since such a theory may contain the whole theory of Material Implication, as Lewis has shown.)

(C) The last system, viz. the single formula (PM 2.24) can be used to throw some light on the *weakness* of these rudimentary systems. For it is clear that it can be replaced for our purpose by the following *System A* of three primitive formulæ:

$$\begin{array}{ll} (1'') & p \supset (q \supset p) \\ (2'') & (q \supset p) \supset (\sim p \supset \sim q) \\ (3'') & \sim \sim q \supset q. \end{array}$$

These formulæ correspond to Hilbert-Bernays I, p. 66 (I, 1); (V, 1); (V, 3). With the help of proofs supplied by them, pp. 76 ff., it can be easily shown that, even after adding their formulæ defining conjunction (whereupon for instance ' $p \cdot \sim p$ ' can be shown to be embracing), and disjunction, the laws of contradiction, excluded middle, identity, and the first law of double negation (V, 2) are all fully independent of *System A*.

(D) If we now omit (3''), i.e. the second law of double negation, we still retain a rudimentary system sufficient to prove the practical uselessness of any pair of contradictory premises. In this *System N*, which consists only of (1'') and (2''), we can no longer prove full embracingness of contradictions, only what may be called their *n-embracingness*; i.e. we can prove that any *negation of any formula whatsoever* can be derived. But this is enough to show their practical uselessness. (Another *System N'*, with the same properties as *N*, is, of course, the single formula ' $p \supset (\sim p \supset \sim q)$ '.)

Of other 'rudimentary systems' I mention only the so-called *positive logic*, which does not operate with negations. In such a

system, contradictions (*i.e.* sentences or classes of sentences from which a 'pair of contradictory sentences' can be deduced) do not exist; but there are still embracing formulæ (*e.g.* the single formulæ ' $p \supset q$ ').

To sum up: in any but the most rudimentary logical systems, and certainly in any system rich enough for mathematical derivations, *embracingness*, *n-embracingness*, and *contradictoriness* coincide. Systems containing the operation of *negation* may be so much weakened that contradictoriness only implies *n-embracingness*. It appears, however, that we cannot weaken them further without depriving *negation* of the character of a logical operation.

There is little hope for Hegelian dialectics to find support in even the weakest of logics. . . .

K. R. POPPER.

Canterbury University College,
New Zealand.

PROFESSOR AARON ON INTUITION.

WHILE I do not think that Professor Aaron's excellent discussion of my views in his article on "Intuitive Knowledge" in the October number of *MIND* calls for a long reply on my part, I should like to say something to make my position clearer. I am **not** prepared to deny that there is such a thing as intuitive knowledge in the strict sense of "knowledge" in which it connotes absolute certainty. But I am much more interested in defending the existence of intuitions in those cases where we have to admit an element of uncertainty, just because these are the only intuitions in regard to which the sceptical doubt is more than merely academic. Nobody seriously holds that the law of contradiction is not true, but people do seriously hold that there is no causation in any sense except approximately regular sequence, that God and even physical objects in the realist sense do not exist, that our ethical judgements have no objective validity. To the class of fallible intuitive judgements belong not only the inspired insights of great genius but most of ordinary men's moral, æsthetic, not to say religious, intuitions, and most of his common-sense beliefs outside logic and mathematics, in so far as they are intuitive at all. The question of fallible intuition is therefore one of extreme importance, and it is very surprising how it has been neglected by philosophers in their quest for absolute certainty. I have used the word "intuition" for both the fallible and the infallible variety, chiefly because I could not think of another suitable term—"guess" is much too weak, just as "knowledge" is too strong, but Professor Aaron thinks them so different that he would prefer a different word. It seems to me, however, that they run imperceptibly into each other so that there is a borderland where it is very difficult to say whether we know with absolute certainty or only believe with practical certainty, *e.g.* in regard to physical objects. It is to my mind much more important to consider whether there are intuitions in the weaker sense, *i.e.* justified beliefs not founded on reasoning or observation (though facilitated by these) but on non-sensuous insight which go beyond what can be formally proved than to consider whether we know anything with absolute certainty. After all, a million-to-one chance is almost as good as absolute certainty, and though I should not go so far as to ascribe a million-to-one chance of correctness to many fallible intuitions, lower degrees of probability are by no means to be despised. Now nothing that Professor Aaron has said affects my defence of fallible intuitions, which was the main object of my Academy lecture on *Reason and Intuition*, though I never meant to describe all intuitions as fallible, or suggest that they *all* would be better for additional confirmation.

But there are a few points that require special mention because they no doubt have occurred to other readers of my lecture besides Professor Aaron :—

(1) The complaint is made that I give no examples of intuitions that seemed absolutely certain and yet turned out mistaken. According to modern mathematics some of the axioms of Euclid would be examples of this. Also we may instance Descartes' claim to know with absolute intuitive certainty that the cause always has at least as much reality as the effect, a proposition which, understood as Descartes understands it, has appeared at least dubious to most of his successors. Men have thought that they knew with certainty that lying was *always* wrong, a proposition which others disbelieve or doubt, or again that vengeance was a duty where others would think it a crime.

(2) Professor Aaron says that propositions which are thought self-evident but are not really so are not intuited but only taken for granted,¹ but I should very much like to see more clearly what the distinction is between being intuited infallibly and being taken for granted beyond the fact that in one case the proposition is certainly true and in the other it may be false. If we are to distinguish the one from the other without further evidence the distinguishing mark would presumably have to be some difference in our state of mind which could be discovered by introspection, yet surely it is not psychological introspection which settles the certainty of an *a priori* proposition? We should further have to see that a particular state of mind logically entailed the truth of all propositions cognised in that state, and can we comprehend such a strange sort of entailment, still less know it with certainty? No doubt "A knows that S is P" entails "S is P", but this may be only because "S is P" is part of the meaning of "A knows that S is P", since we refuse to call it knowing unless we regard the proposition as certainly true, while we do not use "believe" in the same way, so that we are prepared to say that "A believes that S is P" even when "S is P" is false. Knowing may be certain only for the same reason as that on account of which treason never prospers, *i.e.* we do not call it knowing if it is uncertain as we do not call the other treason if it prospers. This merely verbal point does not necessarily imply that a person might not be in the same state of mind as regards two propositions of which he knew one and only falsely believed the other. There is an obvious psychological difference between a state of mind in which I am certain and any state of mind in which I am more or less doubtful; but it is not so clear what psychological difference, if any, there is between a state of mind in which I really know and a state of mind in which I am certain without my certainty being justified. It might indeed cast doubt on any form of intuition if we had to admit the existence of irreducible and inexplicable differences of intuition between different persons such that their intuitions contradicted each other without any possibility of explaining the contradiction, but there is nothing to exclude and much to suggest the view that mistaken intuitions always arise through causes such as a person confusing

¹ P. 303 *ad fin.*

B with C and so taking for granted that he knew intuitively that A was C when he really only knew that A was B, intuiting that A was something like B and then taking for granted that it was B_1 when it was really B_2 , taking as a genuine intuition a mistaken inference or even a certain emotional state, etc. In this sense we might say that all mistaken intuition was taking for granted. But can we ever be justified in being sure that we have not taken something for granted wrongly when we think we are intuiting with certainty? However much we have considered a proposition, how can we know in the strict sense that further consideration might not disclose that we had? I cannot help being convinced that I know with certainty, *e.g.*, the law of contradiction and the proposition that I am not in great pain at the moment I write this, yet I do feel that there are serious difficulties about the notion of absolute certainty which have not been wholly solved to my satisfaction. Perhaps the answer is that in some cases we can see that the recognition of our being wrong is senseless, or that the subject-matter of the proposition is such as to leave no possible scope for wrongly taking anything for granted, as in the case of judgements about present experiences, while in others, though perhaps equally certain subjectively, we cannot see that and are therefore not justified in claiming absolute certainty. In that case the difference would lie not in our subjective state of mind but in the nature of the proposition contemplated. But this is only a very tentative solution to a problem which I did not intend to discuss in my lecture.

(3) To Professor Aaron's criticism that, if intuitions are fallible, they cannot be confirmed by reasoning since the reasoning would itself depend on intuition, it is easier to reply. Firstly, the objection would at the most only apply if I had asserted that all intuitions were uncertain, which is not what I said. Secondly, I do not see why two intuitions which were not absolutely certain but had some evidential value should not be rendered less uncertain if they were found to agree, still more if one could be deduced from the other. Probabilities can be rapidly multiplied where the reports of different independent witnesses agree till, even if each witness by himself was very unreliable, they may approximate to certainty.

A. C. EWING.

IV.—CRITICAL NOTICES.

The Philosophy of Alfred North Whitehead. The Library of Living Philosophers, Vol. 3. Edited by PAUL ARTHUR SCHILPP. Evanston, Ill., North-western University Press, 1941. Pp. xviii + 745. \$4.00.

In an explanatory note regarding his own contributions to this book, which is reproduced in facsimile, Professor Whitehead remarks that "Professor Schilpp deserves our gratitude for discovering a new mode of exhibiting contemporary thought." This is conspicuously true. As readers of *MIND* will doubtless be aware, this new mode consists in collecting together numerous essays by various writers on the different aspects of the work of some leading contemporary philosopher—in the two previous volumes Dewey and Santayana, and now Whitehead—presenting them to the philosopher himself, and having him contribute to the volume thus engendered an essay or essays expressing his own replies to, or comments on, the various criticisms and expositions of his thought which are contained therein. Each volume also contains a brief autobiography of the philosopher who is the subject of it. Thus each volume should exhibit a cross-section of contemporary opinion about some single leading contemporary philosopher together with a summary of his own final reactions to that opinion. There could scarcely be a more interesting "mode of exhibiting contemporary thought."

The present volume most unfortunately falls short of this ideal plan in one of its most significant aspects. It contains no final reply by Professor Whitehead himself. In the explanatory note already quoted he writes: "To my great regret bad health, culminating in a serious illness, has prevented study of the chapters of this book, before publication." He adds, "The absence of any direct expression of my reaction to these chapters is but a slight loss." Doubtless this does credit to Professor Whitehead's modesty but it cannot be accepted as a true statement. The absence of a final reply to his critics, or of a final restatement of his position, is an incalculable loss forever to be regretted—not only to us to-day but to the future of philosophy. There are so many dark places in Whitehead's thought—dark at least in the sense that most of us fail to understand, to see the light, if there is any—and some at least of these are pointed out by the commentators in this volume. It is most unlikely that Whitehead would have been able to illuminate them all, to clear up all the difficulties. (He himself knows, one thinks, where his own vision grows dim.) Yet a reply from him might have thrown light on at least some of them. It is now probable that there are many puzzles regarding his meaning which could perhaps have been solved, but which never will be.

In place of his expected reply to his critics Professor Whitehead contributes to this volume two brief papers, one on "Mathematics and the Good," the other on "Immortality," neither of them previously published. They were written independently and without reference to any of the essays in the book. This no doubt was the utmost that he could do for us in the circumstances explained by him.

Before reviewing the chapters of the book *seriatim* I will record two observations regarding its general character. First, the balance of the book is admirable. So far as I know every aspect of Whitehead's many-sided thought receives adequate consideration. There are essays dealing with his metaphysics, his philosophy of science, his contributions to logic, his ethical, æsthetic, and religious thinking; as well as other essays on special topics. No important side of his philosophical achievements is left out, and, so far as I can see, none is over-emphasized. Second, the standard set by the individual essays is, on the whole, extremely high. That the contributions of such a variety of writers vary in merit goes without saying. But the great majority seem to me to offer important contributions to the understanding and criticism of Whitehead. The result is that the reading of the book will be—except, of course, to confirmed anti-metaphysicians in general and to confirmed anti-Whiteheadians in particular—a source of keen pleasure. No student of Whitehead can possibly afford to neglect it.

In what follows I shall try to give some account of the several chapters, together with a few comments. I omit Dr. Quine's paper on "Whitehead and the Rise of Modern Logic." This will be dealt with separately by Professor Nagel.

The book opens with Whitehead's own *Autobiographical Notes*. He was born in the Isle of Thanet, Kent, in 1861. His father and grandfather were both successful schoolmasters, and his father a clergyman. The early formative influences of his life included the sense of historical continuity and tradition impressed on his mind by the wealth of ancient buildings near his home, and subsequently in Dorsetshire where he went to school. These facts show, he remarks, "how historical tradition is handed down by the direct experience of physical surroundings." In him, it is evident, they awakened that strong feeling for history which marks so many of his writings. In his later school years "poetry, more especially Wordsworth and Shelley, became a major interest." We note this scrap of biographical material because of its evident bearing on the eloquent and deeply sensitive chapter on "The Romantic Reaction" in *Science and the Modern World*, as well as on the strong æsthetic sense evident in all his writings. At Cambridge Whitehead's education—as far as formal classwork was concerned—was exclusively mathematical. But in addition there was a large amount of miscellaneous reading. "I nearly knew by heart," he says, "parts of Kant's *Critique of Pure Reason*. Now I have forgotten it, because

I was early disenchanted. I have never been able to read Hegel : I initiated my attempt by studying some remarks of his on mathematics which struck me as complete nonsense. It was foolish of me, but I am not writing to explain my good sense." During his later residence at Cambridge as fellow and lecturer Whitehead involved himself in politics, and did a good deal of political speaking. He was an early advocate of women's suffrage. He had his experiences of rotten eggs and oranges, "but they were indications of vigour, rather than of bad feeling." He sums up his general political sympathies as follows : "My political opinions were, and are, on the liberal side, as against the conservatives. . . . The Liberal party has now (1941) practically vanished ; and in England my vote would be given to the moderate side of the Labour Party."

The first of the critical essays is that of Dr. Victor Lowe on "The Development of Whitehead's Philosophy." It is the longest in the book, occupying 110 pages, or more than one seventh of the volume, and I shall give it corresponding space. It is a most important study of the evolution of Whitehead's thought, especially of his earlier phases, carried through with conspicuous ability. Most of us tend to think of Whitehead's early mathematical treatises as purely mathematical and as being divided by a sharp line from his subsequent work in the field of philosophy. Dr. Lowe is at pains to show that even in his earliest mathematical writings some of the roots of Whitehead's distinctive philosophical outlook are to be found. In Whitehead's first book, the *Universal Algebra*, although it may be fairly called exclusively mathematical, Dr. Lowe finds many evidences of the philosophizing, as distinct from the mathematical or scientific type of mind. There are also traces in it of ideas which have later entered into the substance of his philosophy. Two of these may be mentioned here. First, Whitehead dissociates himself from the positivistic identification of reasoning with the manipulation of symbols. A set of symbols is, like an adding machine, a way of *avoiding* reasoning. "Civilization advances by extending the number of important operations which we can perform without thinking about them." Second, mathematics is not the science of number and quantity only, but rather a general science of form, of any patterns of experience which can be precisely stated, of which number and quantity are merely subordinate species. It is clear that this idea is carried right through Whitehead's philosophical work and is the basis—though Dr. Lowe does not mention this—of his paper "Mathematics and the Good" published at the end of the present volume. Probably it also explains, to some extent, the suggestion Whitehead made a few years ago at Harvard—which seemed astounding to many of us—that symbolic logic might some day provide the key to the problems of aesthetics.

A mathematical paper published in 1905, entitled *Mathematical Concepts of the Material World* gives the first hint of ideas subsequently developed into the method of extensive abstraction. The

same paper investigates the question whether the three independent and ultimate principles of "the classical concept of nature"—viz., points, instants, and particles—cannot be reduced in number or shown to be dependent upon one another. Regarding this Dr. Lowe remarks (p. 46), "the logical inelegance of the classical concept of the material world is nothing more than the unnecessary disconnection of first principles which has goaded on all of Whitehead's intellectual efforts, and which is named 'incoherence' in the opening chapter of *Process and Reality*." If this is so, Whitehead's objection to the disconnection of points, instants, and particles, is identical with his objection to the disconnection (dualism) between Descartes' substances.

Dr. Lowe divides Whitehead's development into a number of stages. The "purely mathematical" and logical period comes down to 1914. This is succeeded by what is here called the period of "Pre-Speculative Epistemology" (1914-1917). In *La Theorie Relationiste de l'Espace*, a paper read to a congress of mathematical logicians in Paris in 1914, the relational theory of space, which Whitehead had previously regarded as doubtful, is definitely adopted. Three other papers, closely connected in subject-matter, were written at this time, namely "Space, Time, and Relativity," "The Organization of Thought," and "The Anatomy of Some Scientific Ideas." Dr. Lowe remarks that "these papers are the first pieces of writing which would ordinarily be called philosophical." (It was at this time that Whitehead began to frequent the meetings of the Aristotelian Society.) They accept the general pre-suppositions of British empiricism concerning the building up of all ideas out of sense-impressions, and proceed to inquire how scientific concepts, such as points and instants, are to be explained and given empirical reference. The method of extensive abstraction is developed and is now applied to time as well as to space. The hope is expressed that all scientific concepts can be exhibited as concepts of classes of percepts. What is actual is only fragmentary sense-experiences. "The problem is to exhibit the concepts of mathematical space and time as the necessary outcome of these fragments by a process of logical building up." But there are also unpositivistic, if not un-empirical, elements in these papers. Whitehead does not repudiate metaphysics, on the contrary considers it necessary, but claims only that science is independent of it. And the Bergsonian doctrine of the immanence of the past in the present—later so all-important for Whitehead—is hinted at.

The next phase in Whitehead's development, according to Doctor Lowe's division, is that of "The Philosophy of Natural Science" (1918-1924). It includes the *Enquiry Concerning the Principles of Natural Knowledge* (1919), *The Concept of Nature* (1920) and *The Principle of Relativity* (1922), and Dr. Lowe calls these, for the sake of brevity, "the 1920 books." Here we enter for the first time upon writings which are familiar to most philosophers. Accordingly

I shall pass over all expository material and confine myself to reviewing some of Dr. Lowe's comments. In the first place it will be obvious that the empiricist *motif* is still dominant in the 1920 books. Their object is still to ground all scientific concepts on what is actually apprehended in sense-perception. But they are not positivistic. The famous dicta that "nature is the terminus of sense-perception" and that "nature is closed to mind" merely reiterate the autonomy of science within its own realm, its right and necessity to do its own job without interference from philosophical systems. There is nothing in the 1920 books which is *inconsistent* with Whitehead's later metaphysics. But there are several doctrines which are deviations from the "orthodox" epistemological theories of most empiricists. Perhaps the Platonic doctrine of "objects" (called "eternal objects" in *Process and Reality*) should be included here. Certainly the doctrine of "significance" should. According to this doctrine sense-perception yields awareness not only of such things as chairs and tables, but also of their networks of spatial relations with other things in the universe. When we look at the closed cupboard we immediately apprehend, not only the outside of the cupboard door, but also the fact that behind the door there are entities whose space-relations are continuous with those of the things which are fully seen. This, says Dr. Lowe, "is not a doctrine of ordinary empiricism. Every regular empiricist . . . will insist that the network of relationships . . . is not a direct *datum* . . . but either . . . a shorthand way of referring to classes of hypothetical percepts, or . . . a result of inference."

Dr. Lowe further observes that Whitehead's famous attack on "the bifurcation of nature" in these books is at least in part motivated by the objection to "incoherence" among first principles which is a prominent feature of the first chapter of *Process and Reality*.

We now come to the final "metaphysical" period (1925—). This includes the major works, *Science and the Modern World*, *Process and Reality*, *Adventures of Ideas*, and *Modes of Thought*, as well as a number of lesser books and papers. In *Science and the Modern World* *value* as a factor in the world is for the first time considered. The great merit of Dr. Lowe's paper lies in his history of Whitehead's development *up to* this period. It is no part of his plan to give complete consideration to Whitehead's full and final philosophy. He devotes thirty-six pages to it and confines himself to a number of comments on more or less detached questions. I have space to mention only two points. The judgment (p. 89) that one "can find in his metaphysical writings no demonstration of their [James' and Bergson's]—influence" is surprising as regards James and astounding as regards Bergson. This is a minor point. A major question is raised on pages 103 *et seq.*, where Dr. Lowe refers to Whitehead's method as "semi-mathematical." I believe this to be a misinterpretation (which, incidentally, is shared by Dewey). It arises from Whitehead's demand that the first principles of a philosophy

be "coherent," i.e. that they should mutually involve one another and should not be "arbitrarily disconnected" as are the substances of Descartes. Personally I think that Whitehead's demand is unjustified either by logic or evidence, and is in the end unintelligible. But that is another story. The idea may have arisen as a result of the mathematical trends of Whitehead's mind. But it is part of Whitehead's view of the world, of the substance or content of his philosophy, not of its form or method. The method is inductive, consisting in a hypothesis or hypotheses, reached by "descriptive generalization," and then verified (if it is verified) by "confrontation with the facts." To say that the method is mathematical or semi-mathematical suggests comparisons with Spinoza or Descartes which are wholly misleading. He neither begins with supposed self-evident truths—nor even postulates—nor proceeds by way of deductions.

Professor F. C. S. Northrop writes on "Whitehead's Philosophy of Science," taking "the 1920 books" and Part IV of *Process and Reality* as his text. This means that he takes no account of that whole aspect of Whitehead's philosophy of science which seeks to illuminate the *inner* side of nature, identifying energy with feeling, vibration with "throbs of emotion," etc. He is, of course, entitled to select, and doubtless his principle is to avoid what is essentially metaphysical.

Three factors, according to Professor Northrop, determined Whitehead's work in philosophy of science. The first was the reconstruction of physical concepts rendered necessary by the relativity theory of Einstein. The second was the influence of Bergson. Whitehead accepted Bergson's concept of the primacy of process but rejected the condemnation of "spatialization." Hence it was required to defend "spatialization" by defining space relations in terms of temporal concepts. Whitehead did this in the following way. The relatedness of events by the relation of extension, where spatial and temporal extension are not yet divided, is said to be given in sense-perception. Whitehead then argues that we intuit the simultaneity of events throughout nature—a point of sharp difference from Einstein. Temporal extension is then defined as the relation of extension between non-simultaneous events, and spatial extension as the relation of extension between simultaneous events. The third determining factor was the epistemological problem posed by the bifurcation of nature into the world of scientific objects and the sensed world of colours and sounds, and the connected bifurcation into matter and a non-material mind. The first bifurcation is perpetuated by Einstein and modern physics generally. From this double bifurcation, according to Whitehead, all the insoluble problems of modern epistemology have arisen. A true philosophy of science must therefore avoid bifurcation.

In general, Whitehead's way of avoiding it consists in the attempt to show that the events which constitute nature, and the space and

time in which they occur, are the events, the space and time, which are given in sensation, not a set of postulated and unobservable entities and relations behind the scenes. Scientific objects and physical space-time must therefore be defined in terms directly given to sense. Professor Northrop does not think that Whitehead is successful here. He instances the electron, which simply cannot be defined in terms of sense-given adjectives. He concludes that "whether epistemologists and philosophers like it or not, *science requires bifurcation.*"

Professor Northrop has much to say on the Whitehead's disagreements with Einstein. This is too technical a matter to be treated in a review by a layman in physics. But some of the points may be baldly enumerated. Both Whitehead and Einstein, of course, accept a relational theory of space. But according to Einstein the relations hold between postulated and unobserved physical objects, while according to Whitehead they hold between sensed events. On Einstein's view, according to Professor Northrop, it is impossible to account for the differences between a right hand and a left hand glove, while Whitehead's theory explains this. Also the Einsteinian explanation of the rotating bucket experiment is extremely artificial, while Whitehead's theory gives a satisfactory explanation. On the other hand, certain features of Whitehead's theory—connected with his rejection of Einstein's view of simultaneity—render it impossible for him to give a satisfactory account of the concept of public time, which Einstein satisfactorily explains. The chief weaknesses in Whitehead's philosophy of science, Professor Northrop concludes, are an inadequate account of scientific objects, a tendency to find more in sense-perception than is actually given there, and the failure to supply any basis for the concept of public time. Its strength lies in its explaining certain facts, already noted, which Einstein cannot explain, and its determination to face the epistemological problems set by bifurcation which Einstein, of course, entirely ignores.

In his paper, "Space-Time, Simple Location, and Prehension," Professor E. B. McGilvary puts some awkward questions to Whitehead (which never, of course, receive an answer). When Whitehead, criticizing Einstein's doctrine of simultaneity, writes "the very meaning of simultaneity is made to depend on them [light-signals]. There are blind people and dark cloudy nights, and neither blind people nor people in the dark are deficient in a sense of simultaneity. They know quite well what it means to bark both their shins at the same instant," Professor McGilvary accuses Whitehead of ignoring the fact that Einstein makes a fundamental distinction between simultaneity at the same place and simultaneity at a distance. It seems to me that Professor McGilvary establishes his point, and yet it also seems almost incredible that Whitehead should have been guilty of so elementary a blunder.

Professor McGilvary praises Whitehead for the fact that, although in some sense he accepts "the modern assimilation of space and time,"

he does not follow Minkowski in his reduction of space and time to mere shadows of a space-time which alone has independent reality. Whitehead insists upon the heterogeneity of space from time. Here too I think Professor McGilvary (and Whitehead) are right. From no sort of correlation between space-measures and time-measures can the obliteration of the ontological distinction between space and time be validly inferred. Minkowski's famous dictum is poetry rather than science. When physicists erect a new "reality," space-time, and attempt to lower space and time to the status of appearances or shadows, they are plainly wandering outside their field and becoming amateur metaphysicians.

Professor McGilvary writes much of the "fallacy of simple location" and of Whitehead's view that "in a sense everything is everywhere." His discussion seems to me to point to the following difficulty—though I shall express it in my own way, and not in Professor McGilvary's. If I sympathize with Jones' sorrow, I may be said to feel his feelings. One might also say that the same feeling of sorrow is in him and in me. But does this mean that my sorrow and Jones' sorrow are numerically identical? Or only that the feelings are qualitatively alike and that Jones' sorrow is the cause of my sorrow? Exactly the same question may be asked when Whitehead says that, if actual entity A prehends actual entity B, then B's feelings are in A, and B itself is in A. If he asserts numerical identity then his doctrine is self-contradictory, for the definition of numerical identity must include absence of spatial separation. If he does not assert numerical identity, then his doctrine that "everything is everywhere" is (to use one of his own favourite expressions) a "fake."

Professor Joseph Needham writes, as a working biologist, on "A Biologist's View of Whitehead's Philosophy." He modestly disavows ability to appreciate "the finer points," but nevertheless shows himself quite familiar with Whitehead's main writings as well as with the work of other leading philosophers both past and present. He keeps, however, to the larger conceptions, and especially to the "organic view of the world," which is what attracts him, as a biologist, to Whitehead's philosophy. The biologist requires as a foundation for his science some general philosophical world-view (positivists please note). For three hundred years the mechanical philosophy was the only one available, and biologists have mostly been mechanists, not because they were satisfied with this framework of thought, but because there was no other. Vitalism was not an acceptable alternative. Both vitalism and mechanism have now been superseded by "organicism." This stresses two principles. The first is the concept of "organizing relations." The second is the concepts of *envelopes* in space and *succession* in time. Organizing relations, being perfectly natural and even 'material,' yield an explanatory principle for vital phenomena which can be put in the place of the vitalist's animistic "entelechies." The meaning of this

concept is that the plan of an organic whole alters the character of the parts which it organizes; or as Whitehead himself puts it, "An electron within a living body is different from an electron outside it, by reason of the plan of the body." The notion of 'envelopes' means that the different levels of organization occur one within another. Atoms build up molecules, molecules build up colloidal particles and cell-constituents. These again are organized into the living cell, cells from organs and tissues, organs and tissues combine into living bodies, and bodies, especially those of men, form social communities. In the end a world-society must surely develop. Organizing relations are the key to the understanding of the process throughout, the transition from one level to another. Anyone familiar with Whitehead will remember the many passages in which he emphasizes the conception of organisms within organisms, societies within societies.

Professor Needham does not, of course, credit Whitehead with the sole origination of these concepts. Marx and Engels, the emergent evolutionists, and the working biologists, have all helped. Organicism is indeed "a great movement of modern thought." But Whitehead is "the greatest living philosopher of the organic movement" and "the greatest and subtlest" exponent of it. Professor Needham's only criticism is that Whitehead has failed to apply his ideas to sociological and political problems so as to give a lead to the perplexed modern world.

I find it difficult to report on Professor Percy Hughes' paper, "Is Whitehead's Psychology Adequate?" because it consists of disconnected observations, most of which I do not understand; and I can find no central idea. He agrees with Dewey in thinking that Whitehead's enduring contribution is to have shown that "acts in human experiencing are analogous with all acts, physical and physiological." He finds certain inadequacies in Whitehead's psychology, such as that he recognizes only one kind of conscious perception, whereas there are really three kinds, acts of observing, acts of explaining, and acts of appreciating. He thinks that Whitehead's terminology ought to be translated into ordinary language. And in order to make a start on this he translates "positive prehension" into "facilitative response," "negative prehension" into "inhibitive response," "prehensions" into "concrete processes," "subjective form" into "active tone," "nexus" into "transaction," "superject" into "an achievement, a work, an effect." But this will never do.

Professor Wilbur M. Urban entitles his contribution "Whitehead's Philosophy of Language and its Relation to His Metaphysics." It is extremely difficult to compress in a short space the central idea which governs his criticism of Whitehead. Perhaps I may say that, according to Professor Urban, the traditional language which men have developed *necessarily* expresses rightly—though not of course perfectly—human experience of the real, because experience and our

thought of it (which language embodies) are inseparable, so that "without language and its categories there is no experience in any intelligible sense." Such categories as substance and quality are not mere inventions thrust *ab extra* on experience. They have grown organically out of experience itself. They may be imperfect, but they cannot be fundamentally erroneous. Therefore, though minor improvements and modifications of traditional language and its categories are permissible, any radical 'redesigning' of them must necessarily distort reality and be ultimately unintelligible. This is the sin which Whitehead has committed. He would oust subject and predicate, substance and quality, particular and universal, and substitute an entirely new set of terms and categories supposed to be required by a philosophy of process. But these ancient categories, which are thus repudiated, are necessary for intelligible discourse. "Bergson has drawn the only legitimate conclusion from a philosophy of absolute becoming, namely that reality cannot be expressed," i.e. that such a philosophy is unintelligible.

Professor Urban also finds that there are two inconsistent *motifs* in Whitehead, between which he vacillates and which, strive as he will, he cannot reconcile. One is naturalism, the essence of which is "the priority of the space-time world and the derivative character of mind." The other is idealism, the essence of which is "the primacy of value and of the mental categories." One cannot serve two masters. Whitehead tries to reconcile idealism and naturalism, and fails. And in the end it is the naturalism in his philosophy which has the upper hand. In order to fit value into his scheme of thought he has to "redesign" it out of all recognition.

Professor Urban writes as a crusader for ancient ways, and if he sometimes tilts at windmills, this at least makes his paper lively and provocative. His theory of language is subtle and interesting, even if it does seem to imply a denial of the possibility of any really radical or fundamental changes in human thought.

Professor A. D. Ritchie in "Whitehead's Defence of Speculative Reason" takes his cue from Whitehead's small book *The Function of Reason*. The main point in which Professor Ritchie is interested is that Reason should not be understood as mere logic, but considered in the widest way as including most of what can make a life wise and great. But he also writes of several other matters, including emergent evolution, universals, nominalism and conceptualism, formal and final causes, immortality, etc. On these topics he makes comments which, if not very novel, are usually happily expressed. And he contrives to connect them with his main theme. He ends by addressing to Whitehead, as a naturalist, the question whether a naturalist, since any preference he shows for anything over anything else in the world involves the idea of value, can ever be really self-consistent.

Professor Arthur E. Murphy's essay, "Whitehead and the Method

of Speculative Philosophy," is marked by clear thinking and clear and felicitous expression. It is, however, not so much a study of Whitehead as a study of the question what in general is the method of speculative philosophers, in which Whitehead is used as one example. Professor Murphy has an interesting thesis. Speculative philosophers usually purport to tell us what is *ultimately* real, or *finally* actual, in this world. They give very various answers. The real is what is *intelligible*, says one. It is what completely *transcends intelligence*, says another. It is *static*, says Bradley. It is *dynamic process*, says Whitehead. Now the interesting question is how, and by what processes of thought, philosophers arrive at these various conclusions, since they certainly do not reach them by any ordinary methods of empirical or scientific inquiry. The answer which Professor Murphy gives is roughly as follows. The philosopher is concerned to reach a comprehensive and inclusive wisdom. Some aspect of life, some aspect of experience, impresses him as being of supreme importance to human interests, as being that centre around which all other aspects of human experience should be organized and to which they should be subordinated. He expresses this by declaring that *this* aspect of things is what is alone ultimately *real*. "If we are particularly impressed with the transitoriness of things and find it enlightening and humanly wise to view them under the aspect of mutability" we shall declare that becoming is the final actuality. But if we feel strongly that, from a human point of view, "the things that pass are only shadows," we shall develop a metaphysics of the eternal. This transformation of ultimate *importance* for human beings into ultimate *reality* is what seems to Professor Murphy to be the crucial step in the normal procedure of speculative philosophers. It involves, he has no difficulty in pointing out, a complete *non-sequitur*, although he suggests that it may be highly significant as embodying deep insight into the values of life.

I am not sure that Professor Murphy does not confuse the philosopher's *motive* with his *method*. No doubt Berkeley wished to prove that the universe is spiritual because he thought this idea religiously important. But the method involved in his *arguments* was logical, and they are not disposed of by pointing out that behind them there is wishful thinking. Nor are Whitehead's arguments invalidated by what Professor Murphy says, even if what he says is true, Whitehead's method is inductive. Professor Murphy implies that no amount of *evidence* could ever render probable Whitehead's thesis that inanimate matter is really informed with feeling. But that is because he denies the value of the evidence which Whitehead adduces from the dim and vague borderlands of our experience. This, however, is to admit, rather than to deny, the inductive character of Whitehead's method.

Professor William Ernest Hocking's paper, "Whitehead on Mind and Nature," really falls into two parts. The first consists of a number of detached *aperçus* on Whitehead in general, the second of

some criticisms of Whitehead's concept of 'actual entity.' It is impossible to summarize the first part, but I can perhaps give something of its flavour by quoting a couple of brief passages. "Whitehead's construction springs from a striking freshness of impression achieved against the pressure of a 'learned tradition' which it is one of his pleasantries to put into its place. The interest of Plato comes from the fact that Plato had never read Aristotle." And again, "So far as Whitehead's metaphysics is descriptive, it has to be taken as one takes the report of a traveller—not as a matter of debate, for a man sees what he sees. The intuitions are the important part of the story: the conceptual web is subservient to them"—which reminds me that Professor Warner Fyfe used to say, "Tell me what a philosopher's insights are? I don't want to know what reasons he gives for them." Professor Hocking's remarks are often characterized by a certain imaginative sensitivity of feeling, though possibly these quotations, torn from their context, give the reader no inkling of this.

In the second part of the paper the concept of 'actual entity,' with its qualitative feeling-interior, is viewed as being how Whitehead's conception of a nature, 'closed to mind' and constituted only by measurable quantities as the abstract object of science, is to be supplemented by quality and mind—a supplementation rendered necessary by the refusal to bifurcate nature. Of the actual entity so construed Professor Hocking has a number of criticisms. One is that we *rely* on "the emotional insensitivity of ropes and propellers," and we must be able "to ignore the emotions of labouring engines. It has a definite meaning that whole aspects of nature shall be devoid of self-feeling." Another is somewhat as follows. Change cannot be explained as derived from change, since this is no explanation; nor as derived from the changeless, since this is fallacious. Whitehead's actual entity comes near to solving the dilemma through his idea of the *relevance* of that which changes to that into which it changes. But the only true solution lies in the concept of mind, because "mind is the sort of thing which has to change in order to be itself." Professor Hocking's criticisms *might* be capable of being worked out so that one could weigh, test, and evaluate them, but Professor Hocking does not condescend to enter into the sort of paltry details about them which would first be necessary. In the first world war the British Navy used to complain that the French Navy, though it participated brilliantly in grand actions, left the dull daily routine of hard work, mopping up, naval chores, scavenging the seas, to someone else. Professor Hocking seems to me to be like the French Navy.

Once upon a time there was a book published called *Essays in Critical Realism*. Possibly some of the readers of MIND have heard of it. Professor Roy Ward Sellars in his essay, "The Philosophy of Organism and Physical Realism," has a simple method of dealing with Whitehead. He takes critical realism—or preferably the version

of it issued by Professor Roy Ward Sellars—as a yardstick, and measures Whitehead by it. Where Whitehead agrees with critical realism, he is right. Where he disagrees with it, he is wrong. Moreover, Professor Sellars is constantly inviting comparison between himself as a thinker and Whitehead. He asserts in one place that “mine is more a philosophy of organism than is Whitehead’s.” And such phrases as “Whitehead holds” so and so, “I, on the other hand, maintain . . .,” or “the divergence between his position and mine is that . . .,” or (after stating an opinion of Whitehead’s) “a thinker like myself is more inclined to say . . .” occur frequently in the paper. There are two simple reflections which do not seem to have occurred to Professor Sellars. The first is that if his method is reversed, if Whitehead’s philosophy is taken as a yardstick and critical realism measured by it, critical realism is likely to seem exceedingly small beer. The second is that if he persists in inviting personal comparisons between himself and Whitehead, he is not likely to appear to advantage:

Professor Sellars has an almost miraculous gift for pounding down whatever is striking and fresh and original in the author he is studying to a dead level of drab commonplace. For instance, “The doctrine of objective immortality . . . is a principle used to account for a causal reproduction or conformity of an almost conservational type. Now the nearest I could come to this would be in the theory that memory images depend upon the activation of brain-patterns established by past perception.” He treats of Whitehead in terms of his relations to idealism, realism, pragmatism, eventism, materialism, evolutionism, Platonism, pan-psychism, humanism, dualism, monism, vitalism, substantialism, subjectivism. Isms fall over one another in his pages. He thinks in terms of labels. But what is important and interesting about Whitehead is not that he is a realist or an idealist or an atomist, but that he is Whitehead. The truth is that Whitehead’s value lies in the fact that he possesses that rare and precious gift, *genius*, not that he is right about anything! To discuss his philosophy in terms of labels, to smother his outstanding individuality in an avalanche of commonplace isms, this is the one method certain to hide from sight all that is great in him.

Professor John Goheen contributes a lucid and thoughtful essay on “Whitehead’s Theory of Value.” Both he and Professors Morris and Schilpp, writing on Whitehead’s aesthetics and ethics respectively, have to contend with the same difficulty. Though Whitehead has worked out his metaphysics systematically, he has not done the same for his ethics and aesthetics. His writings are indeed rich in ideas and passages about value, about beauty, about morals, but he has written no systematic work in these fields. His insights have to be collected from widely separated places. Remembering then that he has no theory of value—if by that is meant a systematic treatment of all the problems of the field—Professor Goheen finds in Whitehead’s views on value two distinguishable parts: (1) the doctrine of patterns,

(2) the doctrine of feelings—which are never really brought together. In the first there are grave difficulties. We have the Greek idea that the formless, the boundless, the infinite, is empty nothingness, therefore worthless; that limitation, form, pattern, finitude alone yield definite existence and therefore value. If we could simply say that for this reason pattern is as such good, this—however dubious—would be intelligible. But this will not do, nor can it be what Whitehead means. For pattern is a necessary condition of the good only because it is a necessary condition of existence of any kind—of the bad as well as of the good. Pattern cannot be *as such* good. Nor does Whitehead's further suggestion that "the *infusion* of pattern into natural occurrences, and the *stability* of such patterns, and the *modification* of such patterns is the necessary condition for the realization of the good," do much to help. It is too vague to be definitive. And even the further condition that the modifications must be 'fortunate' still leave Whitehead's idea of the connection between pattern and the good hopelessly unclear.

As to his doctrine of feeling, this refers to the fact that value arises in the 'satisfaction' of the actual entity. Value thus considered has two dimensions, first the fact that it is *satisfaction*, second its degree of intensity. Professor Goheen says that Whitehead's theory of value—at any rate this aspect of it—is ultimately a form of the 'interest' theory. In this he is clearly right. But are not certain values, according to Whitehead, fixed for all time and for all inferior creatures by the valuation of eternal objects in God's primordial nature, and does not Professor Goheen overlook this? The passages in *Process and Reality* which have suggested this to me are extremely obscure, and I may have interpreted them wrongly. Even if I am right, of course, this theory of value remains subjective in the sense that it is God's *feelings* which determine these values. And in any case not all values are so fixed, since each actual entity has its own creativity and freedom in the origination of values.

There is one side of Whitehead's value-theory which, I think, is given insufficient attention by Professor Goheen—though he does indeed mention it—I mean Whitehead's view that change is *per se* good. Many of us might be inclined to say that change is only good if it is a change *for the better*, that change for its own sake has no value. *Adventures of Ideas* contains the best defence of the opposite view which I have seen.

Professor Bertram Morris writes on "The Art-Process and the Aesthetic Fact in Whitehead's Philosophy." Even more than Professor Goheen he labours under the difficulty of the complete absence of any systematic treatment by Whitehead of his chosen subject-matter. If I may venture on a paradox, one may say either that Whitehead has no aesthetics at all or that his entire philosophy is a system of aesthetics. For the force which drives the whole cosmic process onward is the urge of each actual entity to achieve its satisfaction. And its satisfaction is the achievement of an

æsthetic harmony of feeling. In this sense æsthetic experience is the ultimate category of Whitehead's philosophy, the inner reality of everything. Even the electron is a creative artist, and to describe what the electron feels and does is really to describe what the artist feels and does—though neither Whitehead nor Professor Morris puts the idea in these terms. Accordingly Professor Morris' essay consists to a large extent in applying Whitehead's account of the cosmic process in general to the art-process, in showing that the latter is only a particular case of the former. For example, according to Whitehead the process of an actual entity arises out of data and proceeds in three main phases, the responsive phase, the supplementary stage, and the satisfaction. Professor Morris finds that this description applies very well to the art-process. "Since the æsthetic process cannot occur vacuously, it presupposes crude subject-matter—the welter of data—from which the æsthetic order derives. In some sense this subject matter is external, and appears to be more or less passively received from without. As it issues into the supplemental stage it becomes enmeshed in the privacy of originative powers which mark the throes of art-creation. In the case of music we may consider that the theme of a composition is rather passively received. The genius of the composer is less in evidence in the theme, which is a statement of the material, than in the way he treats it; that is, in its development. This phase marks the genuine advance into novelty."

Professor Morris' article makes a number of other interesting, if rather discontinuous, points. He also puts forward some criticisms, of which I have space to mention only one. Whitehead's concept of "ingression," he says (and he is obviously right), is a metaphor no better than Plato's "participation"; and it leads to the same difficulties in understanding the rôle and status of eternal objects as Plato in the *Parmenides* discovered in regard to the forms.

In "Whitehead's Philosophy of Religion" Professor Julius Seelye Bixler contributes a sympathetic and appreciative sketch of Whitehead's main ideas on this subject. The article is mainly expository rather than critical. It serves the purpose of bringing together into one focus the wealth of ideas on religion found in various places in Whitehead's writings. Whitehead, he thinks, is "a philosopher who inquires about the meaning of religious intuitions rather than a theologian . . . a defender of our religious moments in spite of their inarticulate nature." Yet he does adequate justice to the more doctrinal side of Whitehead's religious teaching, his insistence upon the idea of a God who persuades rather than one who compels, the finiteness of God, the importance for religion of the notion of the "togetherness" of things, the Whiteheadian attempt to reconcile permanence and flux, time and eternity, the doctrine of evil as arising out of the inevitable mutual obstructiveness of things. He thinks that the most important features of Whitehead's philosophy of religion are its defence of religion against the attacks of positivism,

its rejection of all dogmatism, its teachings of tolerance, humility, and reverence, and its application to religion of the notions of evolution, growth, and progress.

Professor Charles Hartshorne's paper, "Whitehead's Idea of God," is extremely learned and, to the present reviewer, slightly terrifying. The nature of Godhead is first expounded in mathematical symbols. AR-CW, we learn, is "the most promising formula for the divine nature." This is the formula which (on Professor Hartshorne's interpretation) Whitehead follows, in contrast to all previous theologians whose inferior conceptions are symbolized by AA-CW or by AA-CC or by RR-WW or by . . . , etc. The meaning of this appears to be briefly as follows. A stands for absolute perfection, R for relative perfection. A-perfection means the possession of excellence which surpasses that of all other beings. But R-perfection means surpassing all other beings in excellence *while also surpassing self*. C means the conception of God as being pure cause excluding effect, *i.e.* as the cause of the world. W means the conception of God as being pure effect excluding cause, *i.e.* as being identified with the world itself. The Whiteheadian God is in one aspect A, since he surpasses all other beings in the world. But in another aspect he is R since he is, like all other actual entities, in constant process of development each stage of which surpasses previous stages. In his primordial nature he is C, pure cause, while in his consequent nature he is W, pure effect. Thus he is AR-CW. All other permutations and combinations of A, R, C, and W, involve abstractions and commit "the fallacy of misplaced concreteness," and these various possible abstractions are identified with various theological conceptions of God prior to Whitehead's. I am not sure whether I have got all this quite straight, but any reader who thinks that algebra is a good way of understanding God will doubtless take pleasure in worrying it out better than I can.

There follows a section which Professor Hartshorne calls "Arguments for God's Existence." (At this point we leave symbolism behind.) He does not suppose that Whitehead offers "proofs" in the old-fashioned style or thinks that such proofs are possible. Metaphysical thought being, on Whitehead's view, *descriptive* of experience, is based upon penetrating insight rather than on logical proofs. The 'arguments' to which Professor Hartshorne refers consist in the fact that all the fundamental categories of Whitehead's thought, such as potentiality, actuality, creativity, purpose, order, require the concept of God as their completion or at least as their supreme instance. In general and on the whole Professor Hartshorne's exposition here seems to me to be in accord with Whitehead's thought, but it also seems to me that occasionally some of the 'arguments' are really reflections of Professor Hartshorne rather than of Whitehead.

Professor Hartshorne next expounds Whitehead's conception of the 'everlastingness' of God. This is to be distinguished, of course,

from his character as 'eternal.' Eternality attaches to the primordial nature, everlastingness to the consequent nature. Everlastingness consists in the fact that in the process of God's life the past is never lost because it is prehended into, and therefore contained in, the present. Professor Hartshorne points out the affinity between this view and Bergson's concept of the cumulative character of time.

The closing sections of the essay deal with the concept of God as the principle of concretion, evil and God's power, God and eternal objects.

In his paper, "Whitehead's Moral Philosophy," Professor Schilpp collects the different aspects of Whitehead's views on morality from all his later writings and seeks to weld them into a connected whole. This he does with remarkable skill, clarity, inclusiveness, and sense of orderly arrangement. No aspect of Whitehead's moral theory, so far as I can see, is omitted. It is impossible for me to give even the briefest summary of the wealth of material involved, and I shall select for mention only one or two points chosen more or less at random.

Professor Schilpp notes Whitehead's complete subordination of ethics to æsthetics. "Morality," he quotes, "consists in the control of process so as to maximize importance." Importance means 'greatness of experience,' depth, wealth, and intensity of feeling. This is the supreme end-value for every actual entity; and not only morality, but logic, art, and religion, are mere means to it. Professor Schilpp, like Professor Goheen, observes that this is ultimately an 'interest' theory of morals. And he objects to it on two grounds: first, that "after all, morality is not beauty"; second, that "the founding of real morality upon the quicksand of largely emotional reactions provides a treacherously thin foundation for morals." As to the first point, it must be remembered that Whitehead's moral theory is æsthetic only in that wide sense in which any ethics which bases morality upon *feeling* is so. Even hedonism may be said, in this sense, to reduce morals to æsthetics. And the second criticism is a criticism of *any* interest theory of morals, not of Whitehead's theory in particular. As such it *may*, of course, be sound. But a full discussion of this question falls quite outside a paper on Whitehead, and Professor Schilpp (quite rightly) does not attempt any such discussion. Thus his criticism remains a mere *obiter dictum*.

He emphasizes Whitehead's view that there is no single ideal or 'perfection' suitable to all occasions and all circumstances, that there are different *kinds* of perfection—which are often incompatible with one another so that they cannot *all* be aimed at—that one ideal of perfection succeeds another, and that all this is necessarily involved in Whitehead's fundamental conception of the world as process. There can be no universally and eternally valid moral laws. Yet Whitehead is remote from the chaotic and destructive ethical relativism of so many modern theorists. He is not blind to the need for general principles and he finds two such: (1) that of the

generality of harmony—every ultimate value, and therefore every kind of perfection and moral end, consists in the achievement of a harmony of feelings in the satisfaction of the actual entity, and (2) the importance of the individual. These general conditions of value, and of the moral life, may be considered universal, yet leave wide room for the variety and divergence of individual situations, needs, interests, and understandings.

Finally, Professor Schilpp joins with Professor Goheen in finding unintelligible the connection which Whitehead seeks to establish between goodness and mathematical pattern. "Suppose," he writes, "we were to say that the 'good life' is the 'patterned life.' Immediately the question arises: What *kind* of pattern? . . . Whitehead himself says that 'in itself a pattern is neither good nor bad.' Moreover, the 'bad life' . . . must have a pattern also . . . Where do we get the criterion for a choice of pattern? . . . Whitehead offers no specific answer to this question whatsoever."

In "Whitehead's Views on Education" Dean Henry W. Holmes relies chiefly, but not wholly, on *The Aims of Education*, 1929. We must not expect from Whitehead, he tells us, details of an educational programme, but we can get from him important insights on the general significance and aims of education. Dewey's educational philosophy, however valuable, has serious limitations because it is based upon a scientific and common-sense naturalism which finds no place for a deeper vision of the world, "for realities or powers deeper than obvious objects." Whitehead, on the other hand, rids education of "the dreary thought that science has the only answer to its questions and the only satisfaction of its hopes."

Dean Holmes finds the main lines of Whitehead's educational vision to be four: first, that all education must have reference to the living present; second, that it must at every point lead into activities which are useful in the sense of being socially valuable; third, that it must take account of the periodic character of the mind's growth, its natural rhythm of interest and attention. This rhythm, according to Whitehead, has three phases, those of romance, precision, and generalization. Dean Holmes considers this to be a "highly suggestive contribution to educational psychology." The fourth principle is that "the ultimate ends of education are living religion" (in the sense of the inculcation of duty and reverence), "living æsthetic enjoyment, and a living courage which urges men toward new creative adventure."

Dean Holmes says nothing of Whitehead's interesting remarks, in *Science and the Modern World*, on the importance of the education of the more intuitive side of the human mind, through emphasis on art and literature, as a counter-blast to the too dominant influence of scientific abstractions on the modern mind. If he does not happen to be acquainted with the chapter on "Requisites of Social Progress" may I have the great pleasure of introducing him to it?

The last critical essay in the volume is that by Professor John

Dewey entitled "The Philosophy of Whitehead." It is unlike all the other essays in that it does not take as its subject-matter any specific department or aspect of Whitehead's thought, but recounts its author's general reaction to, and estimate of, Whitehead's work as a whole. As might be expected Professor Dewey praises Whitehead for his naturalism. What he picks out as the especially valuable element in Whitehead's system is its abolition of the gulf between physical nature and human psychological experience. He quotes with approval Whitehead's belief that human mentality is only a special case of the structure which runs through all nature. This, says Professor Dewey, is the essential insight in which his own philosophy joins with that of Whitehead. One need hardly point out, however, that although Whitehead and Dewey might possibly agree on this as a "formula," yet like most formulas of reconciliation it merely serves to conceal irreconcilable differences. For Whitehead abolishes the gulf between matter and human psychology by reading the traits of the latter down into the lowest depths of the former—by taking feeling and emotion (albeit unconscious) as the essence of so-called dead matter. Professor Dewey, on the other hand, seeks to bridge the gulf by reading the traits of matter up into the realm of mind. The most vital belief of Whitehead, that on which his entire metaphysics hinges, is that every real thing in nature, every molecule, every atom, every electron, is only to be finally understood as a centre of 'inner' subjective processes of feeling. Everywhere the outward and overt are to be interpreted in terms of categories of the inward. On the other hand, one at least of the vital beliefs of Dewey consists in disparaging and whittling away, if not completely abolishing, the inward, and insisting that it must be interpreted exclusively in terms of the outward and overt. Dewey is indeed fully aware of the difference between himself and Whitehead. He deprecates Whitehead's "mentalistic" vocabulary, and expresses "deep regret" that the notion of physical energy is conceived by Whitehead as "an abstraction from the complex energy, *emotional and purposive*, inherent in the subjective form of the *final* synthesis in which each occasion completes itself." But this is simply to express deep regret that Whitehead is Whitehead. And to extract as the true essence of Whitehead his assimilation of physical nature and human psychology, *leaving out* his insistence on the inner, is simply to disembowel Whitehead.

The two papers by Whitehead himself are entitled "Mathematics and the Good" and "Immortality." Both papers, but especially the former, exhibit the characters which one expects in Whitehead's writings—a style entirely his own, suffused throughout with the peculiarities of his very individual genius, a freshness of treatment in the handling of even the most familiar material, flashes of illumination, sidelights on all manner of topics, everything exhibited from some new and slightly unfamiliar angle. Yet neither essay, in this reviewer's opinion, achieves in the end any substantial result. They

are the brilliant failures of a genius. If in what follows I feel bound to emphasize almost exclusively the elements of failure, this is not to say that the essays are not well worth reading, or that they will not be delightful and profitable to those of us who understand something of the spirit of Whitehead's work and admire it. The reasons for the way I shall have to proceed should be obvious. The elements of failure are easy for a reviewer to reproduce and summarize. The elements of genius are not capable of being transferred from Whitehead's own pages to a review.

"Mathematics and the Good" begins by referring to the famous lecture of Plato to which Aristotle and Xenophon listened. The topic of the lecture was the connection between mathematics and the good. Plato failed in it to elucidate his connection. Whitehead seeks, in the light of more *modern* mathematics, to do so. So far as I can see the only advances of modern mathematics which are supposed to be relevant are the discovery of the non-Euclidean geometries and the freeing of mathematics generally from its servitude to the concepts of number and quantity. It is no longer the science of numerical patterns only, but the science of relations or patterns generally. The point seems to be that value is impossible without pattern, relationship, form—without them we have merely the formless void, wherein is neither value nor dis-value—and that since mathematics has become the science of pattern generally, it ought to throw some light on the nature of value.

I think that if I quote a couple of passages which seem to constitute the core of Whitehead's paper, I shall in that way, better than in any other, communicate the essentials of his thought. "The infinite," he says, "has no properties. All value is the gift of finitude which is the necessary condition for activity. Also activity means the origination of patterns of assemblage, and mathematics is the study of pattern. Here we find the essential clue which relates mathematics to the study of the good, and the study of the bad."

Was it an afterthought which caused Whitehead to add at the end of the last sentence the fatal words "and the study of the bad"? Did he originally put a full stop after the word "good"? And was he then forced by his own honesty to add the phrase about the "bad." For the addition, surely, gives away the whole weakness of his position. *Both* the good and the bad are instances of pattern (because everything in the world is). How, then, can the study of pattern as such differentiate between the good and the bad, or throw any light on the nature of the good? Perhaps there are good patterns, and bad patterns. But can we look to *mathematics* to tell us which is which? Suppose that the pattern of lines which constitute a rectangle exhibiting the golden section is aesthetically *better* than the pattern of lines which constitute a square, how could any knowledge of the mathematical properties of rectangles and squares conceivably inform us of this? It is obvious that it could not.

Is there any hint, then, of how to differentiate? Perhaps we find

one in the following passage : " You cannot discuss Good and Evil without some reference to the interweaving of divers patterns of experience. The antecedent situation may demand depth of realization, and a thin pattern may thwart conceptual expectation. There is then the evil of triviality. . . . Again, two patterns eliciting intense experience may thwart each other. There is then the intense evil of active deprivation."

Perhaps we are to differentiate the evil from the good by such criteria as thinness or thickness of pattern, or by the mutual thwarting or co-operation of patterns. But there is first the extraordinary vagueness of these ideas. And secondly, even if the vagueness is excused as inevitable in the subject-matter, how can the study of pattern tell us whether two patterns of experience thwart or co-operate with one another ? Neither thwarting nor co-operation are themselves patterns. They are matters of feeling, that is, they belong to the content, not to the form, of inner experience. They are therefore entirely outside the scope of any study of pattern, however profound, or of any mathematics, however modern.

There is nothing in Whitehead's essay which takes us a step beyond what is advanced in the two passages quoted. Comb his essay as you will, you will find nothing more. What it all comes to is that the good (and the bad) are patterns of feeling, that mathematics is the study of pattern, and that therefore it should throw light on the good and the bad. But this is precisely as if one were to say that animals are patterns of bone and muscle, and that therefore mathematics as the study of pattern must be a royal road to discoveries in biology. This is a road which palpably leads nowhere.

It is difficult to avoid the conclusion that Whitehead, because he happens to delight in mathematics, absurdly supposes that his favourite subject must provide the solution of every problem in the universe. I knew an oboe-player once who believed that God must be an oboe-player, and that oboe-playing reveals the essential structure of the world. So Whitehead believes that mathematics or symbolic logic is the key to the solution of the problems of aesthetics, ethics, theology, etc. Any such hopes are fantastic and futile. They serve only to illustrate how great minds, like the rest of us, are capable of cherishing the most absurd delusions.

Of the paper on " Immortality " I shall write more briefly, partly because I do not clearly understand a good deal of it, partly because it seems to me of less value than " Mathematics and the Good." It does not, to my mind, exhibit so much of Whitehead's usual intellectual and intuitive vigour and—to the extent that I understand it—it appears to be mostly a restatement of what he has said better elsewhere—though his terminology is different.

If an author, other than a philosopher, entitles an essay " Immortality," it is reasonable to assume that he proposes to say something about the belief in the survival of human personality after death. But this, of course, is not true of philosophers. So far as

I can see that there is nothing whatsoever about this belief in Whitehead's paper.

There seems to be two main lines of thought, but I do not understand how they are connected with each other—if they are connected. First, there are two "worlds," the world of value and the world of fact. Values, which are in some way connected with Platonic ideas, have the character of eternality or immortality. They are timeless. "No heroic deed . . . depends for its heroism . . . upon the exact second of time at which it occurs." The world of fact is the world of change and mortality. But each world requires and impresses itself on the other. Immortal values realize themselves in passing activities (otherwise they would be abstractions), and the passing activity acquires thereby a part in immortality. Especially value realizes and enhances itself in trains of personal identity (but readers of Whitehead know that in his language 'personal' does not connote personality in the ordinary sense. Any enduring object, a stone, contains routes of personal identity.)

The other thought is what Whitehead has expressed elsewhere by the phrase "objective immortality"—though he does not use that terminology here. Every actual entity prehends past actual entities which are thereby objectified in it and pass into its constitution. Especially are all actual entities prehended by, and preserved in, the nature of God (elsewhere this is called the consequent nature of God). Thus "the immediate facts of present action pass into permanent significance for the Universe."

Suppose that this were true. It is not in any sense what is ordinarily meant by immortality. My immortality, on this view, really consists in the fact that I, or what is good in me, will always be remembered (prehended) by God. But if anyone were to say to me "My dear Stace, you are certainly immortal, for God will never forget you and you will always live in his memory," I should consider his doctrine of immortality a "fake."

At the end of the volume there is an admirable bibliography of Whitehead's writings compiled by Victor Lowe and Robert C. Baldwin.

W. T. STACE.

Professor Quine's essay, "Whitehead and the Rise of Modern Logic," surveys the entire range of Whitehead's contributions to mathematical logic. It describes the innovations introduced by him, notes the changes in his ideas as a consequence of the influence of such writers as Peano, Frege, and Russell, and critically examines the general philosophical bearings of several technical aspects of Whitehead's logical constructions. However, Whitehead's views on logical questions, as these are expressed in his metaphysical writings, receive no attention. In spite of this limitation, Dr. Quine's chapter is an illuminating and informative commentary upon one phase of modern logical theory.

Dr. Quine devotes considerable attention to the question whether the Platonic ontology implicitly contained in *Principia Mathematica* is an unavoidable feature of modern formal logic. The issue arises when we ask how the various types of variables which occur in different parts of *P.M.* are to be interpreted. The authors of *Principia* were obviously unclear on the matter; but even when they thought they were reducing "the ultimate furniture of the world" by showing how to dispense with the assumption that there are classes (construed as Platonic entities), their notation re-introduced a realm of propositions and attributes as distinct from sentences and predicates. Indeed, as Dr. Quine notes, from the standpoint of nominalism, the reduction of classes to propositional functions (which are *attributes* on one interpretation) is a backward step, since there are ever so fewer classes than attributes. Dr. Quine briefly suggests how it is possible in a number of cases to avoid the assumption of a Platonic realm of universals and to "re-introduce the common-sense view, according to which statements [and also predicates] are not names at all." The issue which is thus raised is as important as it is difficult. Dr. Quine's proposed reformulation of logical theory so that it will have an explicit linguistic character will no doubt appear strange and unnatural to many readers, though perhaps everyone will admit that a somewhat awkward notation is preferable to a dubious metaphysics. In any event, Dr. Quine's proposals have a *prima facie* plausibility even if they are not entirely free from difficulties of their own.

ERNEST NAGEL.

Psycho-Analytical Method and the Doctrine of Freud. By ROLAND DALBIEZ. Translated by T. F. LINDSAY. Two vols. London: Longmans, Green & Co., 1941. Pp. xvi + 415, and xii + 331. 40s.

"A PUPIL of Pfister's had the habit of making a singular gesture; he used to push up his nose with one finger. One day Pfister decided to make a little psycho-analytical exploration. Looking carelessly at the young man, he spoke of the temptations of lying, cheating and theft. The pupil did not stir. The pastor added that there were also indecent words and actions: at once the young man's finger flew to his nose. At the end of the hour Pfister repeated the experiment, with the same result. Nine months later the young man came of his own accord to ask the pastor's help, and to confess that he masturbated. The nasal gesture was then explained: the smell of semen disgusted him."

A little boy developed the odd game of "catching grasshoppers and beheading them. . . . Then, after having sucked and sometimes eaten the creature's legs, the boy hid its remains in a hole." When, as a young man he reports this, he is asked for his associations.

He associates the green grasshoppers with a detested schoolmaster, "who represented to me the force to which I would have to submit"; he associates the eating of grasshoppers with John the Baptist, a picture of whom, "strongly muscled", stood in his father's house. "He was immensely tall, and stood for me as the typical strong man."

The game was played on a summer holiday, when his father, of whom he was terrified, was ill, and "for several weeks my mother never left his side. . . . It distressed me to know that my father was ill, but I was above all upset at being deprived of my mother."

Have all these associated memories anything to do with the childish play? Or are they 'random' memories, which happen to come up in the patient's mind? Did he want "to kill the green creature, symbol of the hereditary enemy who was keeping him away from his mother, that is to say the master at ordinary times, and the father at this particular period, then to eat the grasshopper in order to imitate the strong man, and thus feel himself for a moment the equal of the schoolmaster or the father?"

These two cases are taken from the first few pages of Dr. Dalbiez's enquiry into Psycho-analytic Method and the Doctrine of Freud.

Was Pfister's pupil making a gesture, or did his muscles 'happen' to contract just at the times when sex was mentioned? Do the associations in the second case reveal any interests, or are they 'meaninglessly' linked? If they reveal an interest, or a constellation of interests, were these interests responsible for the play from the description of which they start?

Thoroughgoing thematism is the key-note of Freudian theory. The alternative is associationism in terms of contiguity, similarity, and contrast, and the Freudian view is that 'thematic' interpretation in terms of interests, desires, tendencies or purpose, is always more plausible than 'meaningless' explanation in terms of 'chance' association.

This, surely, is our ordinary practice in every-day life. It is also in line with a considerable amount of modern psychological and physiological thought, which reduces mechanical linkages to rarity compared with the vast majority of cases in which events find their explanation when they are set in a wider context. The only trouble is that alternative interpretations are possible.

In the two volumes before us Dr. Dalbiez examines the interpretation and doctrines of Freud. In the first he gives us an account of psycho-analytic doctrine, and in the second he passes on to discussion and criticism.

To begin with he disposes of the argument that you cannot find out the cause of a dream or a symptom by considering the associates produced by the dreamer or the patient *after* the dream has been dreamt or the symptom formed.

"Let us", he says, "examine a phenomenon which is familiar to us: the evocation of one idea by another. For example, I am

thinking of the Cathedral of Chartres, and that calls up in my mind the image of the Cathedral of Reims." The fact that the association is 'by similarity' is a discovery which we make *after* the association has taken place, and indeed all association must proceed without consciousness of the relations involved.

Granted that by reflecting on associates we may find that some of them are related by the association of similarity, and then go on to say that it was in virtue of that relationship that the second succeeded the first, what if we find that certain associates are linked together in 'thematic' relationship? Can we not say that the 'theme' was responsible for the coming into the mind of the associates? If this is so, then can we not make good use of free association for the purpose of discovering purposive themes of which most of our behaviour is the expression?

This is the opinion of Dr. Dalbiez, and accordingly he considers the method of investigation by free association to be Freud's great contribution to Psychology.

He distinguishes very properly between the psycho-analytic technique of free association, together with its attendant technique of symbolic interpretation, and what he calls: 'Freudism'—the hypotheses and 'philosophy' which has been built up on the revelations for which the technique is responsible.

So far as the technique itself is concerned Dr. Dalbiez analyses the criteria which we should employ when we want to know which of any manifold of associates are meaningful, and which are not. He enumerates five: (1) the bare fact of evocation, (2) the similarity between what is evoked and the dream or symptom which is to be explained, (3) the frequency with which an associate recurs in a system of associates from different elements in the complex which is being interpreted, (4) the convergence of associates round a theme, and (5) the verification of associates by reference to independent witnesses.

We might add a sixth: the contribution from the accumulating experience of psycho-analysts. After all, no dream-interpretation, no symptom analysis occurs, as it were, *in vacuo*; the accumulated experience of other interpretations must play its part.

Perhaps this criterion will not appeal to Dr. Dalbiez, though he is bound to use it in practice, because in psycho-analysis, as in all psychological investigations, one is haunted by the bug-bear of individuality. Dr. Dalbiez is well aware of this. No Œdipus-complex is to be accepted in any individual case unless proved for that case. "We refuse," he says, "to subscribe to a metaphysic of incest."

It is certainly true that Freud's very natural scientific aim at generalisation makes us all a little uncomfortable. For example he writes in 'Inhibitions, Symptoms and Anxiety': "The idea of being devoured by the father is typical, age-old and common to all children". Is it only our distressing nice-mindedness which

makes us wince at such a statement? Surely all we are entitled to say is that having discovered such a fear in several children, we must be prepared to find it in others.

The real difficulty is that every experience which is going to make a difference to subsequent development is significant because of the special meaning which it has for the particular experient. Generalisation under these circumstances is a tricky business.

For all that it must be confessed that Dr. Dalbiez does less than justice to the theoretical brilliance of Freud. Science always proceeds in two directions—from the particular to the universal, and from a vision of the universal in the particular back to the particular which is then incorporated in the theory. The latter is by far the riskier, and by far the more profitable passage. Writers on Freud so seldom convey the extreme tentativeness with which he suggests his theories. The quotation which I have myself taken seems to contradict what I have said. Perhaps it would be truer to say that he puts forward startling assertions in an atmosphere of undogmatic suggestion.

Very naturally the bulk of both volumes is concerned with Freudian doctrine. The general account of it is not by any means complete; it is enough for Dr. Dalbiez's purpose, because it brings out the main features: thematic interpretation, the unconscious, the prominence of sex, the positive force of repression (a bone of contention between Freud and Janet), the psycho-genesis of mental disorders, and the contribution of psycho-analytic doctrine to the study of art and religion and morals.

We are, however, startled to read, on page 409 of vol. i: "The themes of self-punishment and of unconscious guilt-sense have been given such importance in recent psycho-analytical literature that some critics have fancied that the Freudian building was to be wholly reconstructed". Surely if we are promised an account of Freudian theory, we are entitled to expect a description of the 'themes of self-punishment and unconscious guilt-sense', to say nothing of a mention of the predominance of aggressiveness in modern Freudian theory.

The result is that we cannot recommend vol. i to anyone who wants to get an outline of Freudianism up to date.

That, however, is not Dr. Dalbiez's purpose. The recent developments have only carried thematic interpretation further. New features, such as the infantile fear of the super-ego, and the view that it is really the destructive element in sex that causes it to be so ill-thought-of, have reconstructed the Freudian building for its inmates—the lavatory has been moved from the bedroom to the gun-room—but the nature of Freudian explanation has remained the same.

Dr. Dalbiez accordingly investigates the possibility of the unconscious. He is, however, more interested in the concept of unconscious perceptions, images and emotions than in unconscious

desires, which are really the whole point. The result is that the first chapter of vol. ii is not very satisfactory, particularly as by consciousness he seems to mean self-consciousness. Surely the dynamic sense of desire, as opposed to the introspective sense, is non-conscious rather than unconscious. We are conscious of desiring, but we are never conscious of a desire. I am not denying unconscious mental events, though I doubt whether Dr. Dalbiez has proved their existence; the point is that the concept of unconscious desires or tendencies might be a necessary explanatory apparatus, even if unconscious perceptions or images were not accepted.

The most interesting parts of Dr. Dalbiez's book are those in which he compares the Freudian repressions with Pavlov's theory of inhibited conditioned reflexes, and those in which he contrasts the views of Freud with those of Janet.

The two comparisons are connected. Pavlov held that the 'extinction' of a conditioned reflex is a matter of active inhibition, and this notion of active inhibition is precisely that which Janet denies in his interpretation of hysteria, a denial which makes it impossible for him to explain obsessions.

Dr. Dalbiez is very sensible about the Freudian sex-theory, and contributes a valuable modification of the concept of infantile sexuality. He suggests that the so-called infantile perversions are rather instances of lack of differentiation, than of the presence of positively perverse tendencies. The child is not 'polymorphous pervers' so much as 'polymorphous pervertible'.

Finally Dr. Dalbiez makes the important point that religion, art, and morality cannot be 'explained away' by sublimation. There are sides of our natures, which Freud himself assumes in his work, which are beyond the scope of psycho-analytic theory. Having discussed the obvious objections to the 'primeval murder' theory as accounting for the incest ban, Dr. Dalbiez reaches the really important point: "How are we to think that the simple fact of having killed its father should be able to bring about, in an animal's consciousness, the rising *ex nihilo* of an abstract idea of a norm, and the consciousness of having departed from that norm?" (vol. ii, p. 304).

Art, again, is autonomous and so is religion. To show the part played by unconscious interests in art and religion is of undisputable value, to think that you have thereby 'explained' the essential qualities of either is ridiculous.

Perhaps the most unfortunate impression which is sometimes conveyed is that Freudian psychology is a complete psychology. Its enemies used to say that Freudian psychology explained everything in terms of sex. This is demonstrably false, and perhaps no one now makes such a silly mistake. It is equally foolish to suppose that the vast explanatory structure which is 'Freudism' accounts for all psychic life.

Dealing with the psycho-analyst's 'campaign against resistance', Freud remarks: "If it is conscious, or when it becomes conscious, we bring forward logical arguments against it; we promise the ego rewards and advantages if it will give up its resistance" ("Inhibitions, Symptoms and Anxiety," p. 146). Again, his daughter is quoted by Dr. Dalbiez on page 262 of vol. ii: "At the end of the analysis of an adult, we do not force any patient to cure himself. What he will do with the new possibility open to him, depends on himself."

All this implies decision and understanding, faculties which do not find a place in the dynamic theory of psycho-analysis. That theory is none the worse for that, let us hasten to say, but psycho-analytic writers occasionally make us feel that they are not always aware of the limitations of their doctrine, while continually, if unconsciously, transcending them.

Dr. Dalbiez's book will not, probably, be well received by Freudians, because it is not up to date, because criticism is still resented in some quarters, and because the grounds which he puts forward for acceptance will seem unnecessary to those already convinced. It cannot be recommended as a text-book for the reasons given above. It should however, be of great use to the student of psychology who wants to reconsider the validity of psycho-analytic argument. To such a person we can unhesitatingly recommend it. He may be irritated by certain metaphysical obscurities, but he will find it packed with illustrative material, full of information about alternative French theory on psychological abnormality—most valuable for the English student—and characterised by that analytical clarity which we associate with the writings of Dr. Dalbiez's countrymen.

A comparison has been drawn between Freudianism and Marxism. They are both, I understand, said to be somehow symptomatic of the same sociological situation. Whatever we may think about that, it is curious that just as we can at last be sensible about the Russian regime, without being condemned as 'capitalist lackeys', now that Russia is respectable, so we can adopt a sensible and critical attitude towards Freudianism, now that its main thesis is generally accepted, without being condemned as inhibited prudes, forced by our own sense of guilt to avert our faces from Revealed Truth.

W. J. H. SPROTT.

V.—NEW BOOKS.

The Philosophy of Schleiermacher. By RICHARD B. BRANDT. Harper and Brothers: New York and London, 1941. Pp. viii + 350. \$3.00.

THERE can be little doubt that no theologian since the Reformation has exerted a greater influence upon the subsequent development of his science than Schleiermacher. The nature of that influence may perhaps be best expressed by saying that he taught theologians to regard theology rather as the study of religious experience, whether in general or within a particular religious community, than as either that of a system of truths revealed by God or deduced from statements believed to come on divine authority or that of the nature of God as discovered by methods accessible to all rational beings apart from any specifically religious experience; or, again, as that of these as in some fashion combined. When Schleiermacher wrote, Kant had recently put forward another view, according to which religion, the subject-matter of theology, might exist 'within the limits of mere reason', but not of the purely speculative or theoretical reason, since it was concerned solely with the 'categorical imperatives' of the *practical* reason, and its deliverances were valid as affirmations not of what *is*, but of what *we ought to do*. Schleiermacher, however, was not content with this view. Religion was for him in its essence no more practical than theoretical; it was no more identical with morality than with science; for it lay neither in intellect nor in will but in *feeling*. It is in fact the feeling aroused in the individual soul by the impact of the universe upon it; a feeling which he went on to qualify firstly as a feeling of dependence and eventually as a feeling of absolute dependence.

It is hardly necessary to say that many have followed Schleiermacher in finding in religious experience the primary *data* of theology, and in recognising that in religious (as also indeed in moral and æsthetic) experience there is present an element of emotion apart from which knowledge of the object of the experience is impossible, without endorsing all his (not always consistent) statements concerning the relation of this element of emotion in religion to the intellectual recognition of its object or to the volitions associated therewith. The famous apostrophe to Spinoza in the *Reden*—perhaps the most celebrated passage in his writings—illustrates an influence which gave to Schleiermacher's philosophy of religion a bent which may well seem to have little connexion with the emphasis on religious experience which was its most striking and important characteristic. Many may be disposed to think that the unquestionable presence in Spinoza of a religious passion which made the traditional imputation to him of 'atheism' seem to Schleiermacher strangely inappropriate led Schleiermacher to exaggerate the religious possibilities of Spinoza's conception of that 'universe' which, in the words of the apostrophe just mentioned, was his 'only and eternal love'; and to feel that in Schleiermacher's insistence that it was upon a universe conceived as Spinoza conceived it that we are, in religion, conscious of an 'absolute dependence' which excludes all individual freedom, he misinterpreted the evidence of those 'feelings' to which he did so much to call attention. So too, while he was no doubt right in contending that belief in 'God'

and 'immortality' as popularly conceived are not what is fundamental in religion, it may well be questioned whether he did not, despite his frequent denials that religion was concerned with metaphysic and despite also that strongly individualistic aspect of his thought which led him to suggest that ultimately there must be as many religions as individuals, take for 'God' the universe of Spinoza's metaphysical system, and for 'immortality' a place in that universe rather than any objects suggested by the religious 'feelings' associated with those names. Readers of James Martineau's *Study of Religion* may recollect a remarkable discussion in that book (vol. ii, pp. 336 ff.) of the letter of condolence addressed by Schleiermacher to Henrietta von Mühlenfels (whom he afterwards married) on the death of her first husband, Ehrenfried von Willich.

It is not easy under war conditions, which bar the reviewer from ready access to any library but his own, to write an adequate notice of such a book as Mr. Brandt has produced on the philosophy of this influential thinker. It is obviously the fruit of much industry, and the writer has not merely collected material but thought about it; and in the course of his labours has inevitably acquired a more extensive and a more detailed knowledge of Schleiermacher than his reviewer can pretend to possess. Nor, if he has not succeeded in producing a very clear impression of his author's philosophical position, is this to be considered as altogether his fault; for, as has been already said, he is probably right in regarding Schleiermacher as no very consistent thinker. At the same time it must be confessed that he does not always inspire confidence in his own competence to deal with the problems on which his subject demands that he should form a judgment. One finds in him a tendency to judge of philosophical opinions from a point of view which the author he is criticizing would have disowned, on the assumption that it is indisputable. This is particularly the case in regard to the relation of philosophy to theology, a matter especially important in dealing with Schleiermacher. Not unconnected with this characteristic is his failure to appreciate the significance of a passage which he quotes (on p. 205), where Schleiermacher (like Aristotle) denies the possibility of deducing all truth from a single first principle and affirms the necessity of *ἰδια ἀρχαί* for the different sciences. Mr. Brandt seems to find nothing here but a denial of the power of reason to dispense with sense-experience. On page 77 he surely confuses the spatial relation between the brain and other bodies with that between mind and its objects, the brain being apparently without hesitation identified with 'mental events'. One would like again to ask him why he supposes (on p. 46) that the 'emergent materialists' of to-day could more successfully dispute the denial that materialism could account for mind than the materialists of Schleiermacher's generation. And it is characteristic that he should regard it (p. 284) as 'paradoxical' in Schleiermacher to say that 'one will not accept the authority of the Bible unless one already has faith in Christ'. Does he not know that the New Testament was the outcome of the faith in Christ of the community which produced it, and not the other way round? It was difficult to believe Schleiermacher to have said (as Mr. Brandt informs us on p. 115) that 'in the starry heavens everything is indeterminate and infinite'; and on reference to the original it is evident that he never said anything of the kind, and that Mr. Brandt has altogether missed the point of the reference to the stars which he seems to have in mind. It is only of the arbitrary and traditional names given to them that Schleiermacher is speaking and to which he compares the

descriptions given by systematizers of doctrine to the individual feelings which in his view constitute the essence of religion.

Is not *Wissenschaftslicbe* on page 66 a misprint for *Wissenschaftslehre*?

C. C. J. WEBB.

Whitehead's Theory of Knowledge. By JOHN BLYTH. Published by Brown University, Providence, R.I., U.S.A., 1941. Pp. 101. \$1.00.

THE first thing that strikes one in perusing this little book is that it is very well written. The topic is a difficult one; even to sort out the epistemological doctrines from the wealth of Whitehead's writings is an undertaking in which an author might easily become confused, involved, and inept; but not so Mr. Blyth. His exposition of the theories he proposes to criticise is really admirable, and is greatly helped by a very skilful combination of quoted materials covering point after point. Despite these frequent quotations, his own style is unbroken and makes fluent reading.

The points for criticism are simply and boldly tackled. The gist of his argument is that Whitehead's theory of knowledge rests on three basic metaphysical principles, namely the Principle of Subjectivity (to the effect that nothing exists that is not in some experience), the Principle of Relativity (*i.e.* that actual entities enter into each other's essential nature), and the Ontological Principle (which asserts that all scientific reason is grounded in the nature of actual entities); that these three general concepts are inconsistent—the acceptance of any two of them violates the third—so that any system built up on them must be essentially incoherent; and that this incoherence vitiates every phase of Whitehead's epistemology, from the elementary theory of perception to the final consideration of truth and knowledge.

These are severe criticisms, yet they are, to some extent, substantiated by Mr. Blyth's analysis of the concepts involved. There are unmistakably incompatible approaches leading to this great and sweeping philosophy. The variety of approaches from different elementary phases of experience is, of course, what gives it the stamp of universal genius; it is also, inevitably, a pitfall to ultimate clearness. This pitfall is what Mr. Blyth uncovers. He maintains that his philosopher has tumbled irretrievably into it; his book begins and ends with an endorsement of L. S. Stebbing's statement that Whitehead's doctrines are "a product of thinking that is essentially unclear".

Now, Whitehead is often unclear, and Mr. Blyth has demonstrated some of his muddles; but whether he is essentially so, or merely because he is elected, like Kipling's happy artist, to "paint on a ten-league canvas, with brushes of comet's hair", and because of his inveterate habits of mental pioneering, remains (at least for me) a moot question. As Blyth reviews the system, there are fundamental conflicts. His critique of the "extensive continuum" is a very interesting analysis, at once subtle and cogent, which draws into question the possibility of maintaining both the Ontological Principle and the Principle of Relativity. Since it deals essentially with a scientific concept, it is more justified than some of Mr. Blyth's other arguments in its demand for fixed meanings and common logic. His weakest attack is, I think, that on the doctrine of sense-knowledge; not only does he resort to a censure of certain definitions on the mere ground of their oddity (p. 48), but he also regards as a dilemma

the fact that "that part of sense-perception which is most vividly illuminated in consciousness, namely perception in the mode of presentational immediacy, can play no important part in the origin of consciousness" (p. 87). Why an experience peculiar to the state of consciousness should be an agent in originating that state, is not immediately obvious.

In his consideration of the highest phase of mentality, the appreciation of truth and delusion, the author shows most clearly the main weakness of his critique—namely, an inability to think in terms of *process*, of active, fluid, and essentially *temporal* "actual entities". Because an actual entity "is just what it is", he cannot help conceiving it as a homogeneous, instantaneous "it". But for Whitehead, every "it" is an "occasion"; its pattern is a dynamic pattern of incipience, process, fulfilment. Of course the difficulty of applying criticism to such a philosophy is that its author is obviously trying to break through certain basic, accepted concepts of world-construction, and at times breaks through *those which we still employ to understand his revolution*. Then he becomes unintelligible; but whether forever so, or whether the subtlety of our vocabulary will ever catch up with him, is hard to predict. Certainly, Mr. Blyth, for all his careful exposition, misses the real essence of the philosophy of organism—the almost mystical consideration of *potentiality*, the attempt to describe, through the static medium of language, an insight into the essential nature of *process*. The fact that every actual entity involves a span of time, has a beginning not fixed by a durationless moment, and end equally approximate, and pervades a space unbounded by any geometric line, and yet "is just what it is", makes it improper to think of its being "in a place" and "at a time" in quite the same way that classical physics employs these terms; yet Mr. Blyth in his discussions of contemporaneousness, of prehension, and especially of the potential, does think in these terms. Despite the fact that he says, early in Chapter III, "The most striking feature of experience is its flux", when we come to his criticism of the relations among entities, in Chapter V, he seems to have lost completely the sense of their fluidity and their essential temporality. But the philosophy of organism without this constantly underlying recognition of *process* is a mutilated thing.

The objections which Blyth brings against the very categories of Whitehead's system are by no means to be dismissed as a mere misunderstanding or as "logic-chopping"; they are, for the most part, weighty and well-considered criticisms. Yet they are not so much a condemnation of the philosophy of organism as a challenge to its author's ingenuity to remove their grounds. Perhaps the three incompatible categories, in the hands of so great a logician as Whitehead, need only a careful revision—howbeit a profound one—to make the system, which is the frame and scaffold of a deep and undoubtedly veridical insight, hold firmly together. In a living system of thought, a confusion may be serious and radical and yet not "essential". To accuse Whitehead of inconsistency is somewhat like bringing that same charge against Plato, or Goethe; it is usually justified, and yet not fatal to the man's work, which is too great to stand or fall even on so vital a test as the coherence of its avowed premises. Perhaps no reader of Blyth's critique will find as much stimulation in it as Mr. Whitehead himself, for to one who has achieved a great insight, the work of explication, which thrives on criticism, is endless.

SUSANNE K. LANGER.

Paths of Life. Preface to a World Religion. By CHARLES MORRIS. New York and London: Harper and Brothers, 1942. Pp. 257. \$3.00.

You might guess from the sub-title that this book is written by one who does not realize the difficulties of what he is attempting. Or you might say "Here at last, perhaps, is a man of intelligence and feeling who is not afraid to talk about feelings which are not feelings of amusement or contempt nor of enthusiasm for dogs or art." I think both guesses are right. Of course the author probably has more realization of the difficulties than he allows to appear. I may say at once that I like the book including the poems at the end which seem to me thoroughly in place.

Mr. Morris summarizing what he is going to do writes on page 6 "After a preliminary account of human nature six of the historic paths of life will be considered in turn: the Buddhistic path of detachment from desire, the Dionysian path of abandonment to primitive impulses, the Promethean path of creative reconstruction, the Apollonian path of rational moderation, the Christian path of sympathetic love, the Mohammedan path of the holy war. In the analysis of these paths the outline of a seventh path—the path of generalized detachment-attachment—begins to be visible."

The different types of personality which adopt the different paths arise from the combination in different strengths of three components of personality which Mr. Morris calls the *dionysian*, the *promethean* and the *buddhistic*. As he says "There may be some danger of confusion in using the same stem to designate both a component of all personalities and a specific type." It is true that on page 30 he gives definitions of the personality types in terms of the relative strengths of the personality traits. But there is no guarantee that these definitions will give the same application of the names for the personality types as the definitions of page 6. I prefer those of page 6. Mr. Morris writes a chapter on each of the Buddhistic, Dionysian, and Promethean personality types and another chapter on the remaining three types. It is on the descriptions and examples in these chapters that I rely for understanding what sort of person he wants each personality name to stand for. Consequently, although Mr. Morris in his definitions says that a man is not of the Dionysian type unless he not only has much of the dionysian component but also has more of the buddhistic than of the promethean, I venture to question whether he really wishes to say this. A man who five days a week with wine and women defies despair (*cf.* Sylvia Anthony in *The Child's Discovery of Death*, pp. 67-69) but on week-ends works with the greatest determination on his picture or his improved television apparatus is Dionysian in spite of the fact that he has more of the promethean component than of the buddhistic. And I am sure Mr. Morris wouldn't wish to call such a man Mohammedan although on his definitions he would have to. Immediately definitions, as opposed to the description of types, are introduced, one feels more than ever inclined to protest that the personality-manifold has more than three dimensions. Even description of it by types is very difficult because it is difficult to find types round which the members of the manifold cluster sufficiently to make the description of those types useful in the description of the manifold. With motor cars and even the felidae it is different. With pictures it is again difficult. However, classifications of pictures help us to grasp their relations to each other and some classifications, some choices of typical pictures,

are better than others. So it is with choices of typical persons. Mr. Morris's seems to me very inadequate, but all the same illuminating and interesting. And he says many things on the way which seem to me good, for example about Faust (p. 89) and about Dewey and art (p. 102).

As to the seventh personality type. It is one which accepts and integrates "all of the features of the human self which in various ways are given unequal supremacy in the other types of personality." Are the features integrated when they are given equal supremacy, equal expression? And what does this mean? And if the seventh type is to be a better type then shall we not have to follow Aristotle and substitute for the word 'unequal' in our definition the word 'undue'? And then we shall have to add, like Aristotle again, that what is the due proportion for one person may not be for another (Mrs. Blanco White, *Worry in Women*, p. 203). It is an important tautology that a man is best when he best balances his propensities, the opposites within him. "Clearly the union of the opposites has been set as the highest goal of human achievement" (Dicks, *Studies in Psychopathology*, p. 109). But some of the best balances are surprising. And it is far from a tautology that a man who keeps the principle "One mustn't go too far" much before his mind will best attain the best balance. Undoubtedly it's wise before building to count the cost but those who've built best haven't. Undoubtedly consideration for another thing may do no harm but good to what one puts first—"I could not love thee dear so much loved I not honour more." But it is also worth remembering with McTaggart, Mr. Kipling's dying girl "There is no god but thee beloved." It is the hymn which says "Sun, moon and stars forgot" which the racing motorist must have been singing when with his naked foot on the red hot throttle he got that extra 1.7 m.p.h.

JOHN WISDOM.

The Psychodynamics of Abnormal Behaviour. By J. F. BROWN. New York and London: McGraw-Hill Book Company, 1940. Pp. xvi + 484. 24s. 6d.

THIS work consists of sections on methodology, psycho-analysis, and the psychoneuroses and psychoses, with a view to giving a coherent account of personality-structure. It is to be highly recommended as a textbook and it will be of interest to some specialists. But it does not on this account fall between two stools, for it does not enter into controversial matters or questions of advanced research. One of its great merits is that it stresses the continuity between mental states that are classified under different names: that is to say, some diseases of the mind may have similar symptoms and owe their difference solely to differences in the strength or prominence of a few particular symptoms.

The author introduces the methodological concept of *field-theory* to replace that of a *class*, though he does not describe it so fully as in his previous work, *Psychology and the Social Order* (1936). The concept may well be of great importance, but its precise nature and the use to which it could be put do not seem very clear from either work; it is essential to know *concretely* what we could do with the concept that we could not do without it.

The high quality of the book must not be overlooked on account of the brevity of this review.

J. O. WISDOM.

Received also :—

- C. D. Broad, *Berkeley's Argument about Material Substance* (British Academy Annual Philosophical Lecture, 1942), London, H. Milford, 1942, pp. 22, 1s. 6d.
- John Henry Muirhead, *Reflections by a Journeyman in Philosophy*, ed. by J. W. Harvey, London, G. Allen & Unwin, 1942, pp. 215, 15s.
- A. Tarski, *An Introduction to Logic*, New York, Oxford Univ. Press, 1942, pp. xviii + 239, 14s.
- P. Frank, *Between Physics and Philosophy*, Cambridge, Mass., Harvard Univ. Press; London, H. Milford, 1942, pp. 238, 15s. 6d.
- J. Jeans, *Physics and Philosophy*, Cambridge University Press, 1942, pp. 222, 8s. 6d.
- Science and Ethics*, by C. H. Waddington and Others, London, G. Allen & Unwin, 1942, pp. 144, 7s. 6d.
- T. E. Jessop, *Science and the Spiritual : the Threshold of Theology*, London, The Sheldon Press, 1942, pp. 65, 1s. 6d.
- Chinese Philosophy in Classical Times*, edited, annotated, and newly translated by E. R. Hughes, London, J. M. Dent (Everyman's Library, 973), 1942, pp. xliii + 336, 3s.
- The Great Learning and the Mean-in-Action*, translated with an Introductory essay on the History of Chinese Philosophy by E. R. Hughes, London, J. M. Dent, 1942, pp. xii + 176, 8s. 6d.
- Philosophical Essays in Memory of Edmund Husserl*, ed. by M. Farber, Cambridge, Mass., Harvard Univ. Press; London, H. Milford, 1942, pp. viii + 332, 22s. 6d.
- S. L. Ely, *The Religious Availability of Whitehead's God*, Madison, University of Wisconsin Press, 1942, pp. 58, \$1.25.
- W. Koehler, *Dynamics in Psychology*, London, Faber & Faber, 1942, pp. 120, 8s. 6d.
- L. Stein, *Speech and Voice : Their Evolution, Pathology and Therapy*, London, Methuen, 1942, pp. xii + 233, 15s.
- K. Homey, *Self-Analysis*, London, Kegan Paul, Trench, Trubner & Co., 1942, pp. 309, 10s. 6d.
- A. M. Carr-Saunders, *The Biological Basis of Human Nature* (L. T. Hobhouse Memorial Trust Lectures, No. 12), London, H. Milford, 1942, pp. 24, 2s.
- R. West, *Conscience and Society*, London, Methuen, 1942, pp. 260, 15s.
- S. Belkin, *Philo and the Oral Law*, Cambridge, Mass., Harvard Univ. Press; London, H. Milford, 1942, pp. xiv + 292, 20s.
- W. G. de Burgh, *George Dawes Hicks, 1862-1941*, London, H. Milford, 1942, pp. 29, 3s.
- G. Heard, *Man the Master*, London, Faber & Faber, 1942, pp. 249, 10s. 6d.
- C. C. Pratt, *Psychology : The Third Dimension of War*, Columbia Univ. Press; London, H. Milford, 1942, pp. 29, 2s.
- Handbook of Latin American Studies, 1939*, ed. by L. Hanke and M. Burgin, Cambridge, Mass., Harvard Univ. Press; London, H. Milford, 1942, pp. xvi + 476, 22s. 6d.
- Summaries of Theses for the Degree of Doctor of Philosophy* (Harvard University), Cambridge, Mass., Harvard Univ. Press; London, H. Milford, 1942, pp. ix + 323, 11s. 6d.
- Studies in the History of Science*, University of Pennsylvania Bicentennial Conference, Philadelphia, University of Pennsylvania Press; London, H. Milford, 1941, pp. 123, 9s. 6d.

VI.—PHILOSOPHICAL PERIODICALS.

PHILOSOPHY OF SCIENCE, viii, 4 (October, 1941). **W. M. Malisoff.** *On the Postulates of Empiricism.* [A preliminary study of the possibility of discovering the postulates of empiricism by empirical methods. "I propose soon to write out such postulates experimentally in a number of studies in the hope of matching them patiently and modifying them till they fit every theory that has been produced in physics."] **A. C. Benjamin.** *Modes of Scientific Explanation.* [Distinguishes *naming*, *identifying*, *analysing*, *synthesising*, and *associating* (with several subdivisions) as the main types, and illustrates each by reference to the explanation of the behaviour of a common electric bell. "... there is no question of right and wrong with regard to these modes of explanation. All of them are probably involved in all science." Shows a notably tolerant attitude towards teleological types of explanation.] **G. J. Bowdery.** *Conventions and Norms.* [Concerned with "the discovery of criteria to identify conventions and the descriptions of some of the more general properties of conventions with particular reference to scientific inquiry". Provides an elaborate definition of *conventional*, too long for quotation, and some useful discussion of ambiguities associated with this important notion.] **C. B. Weinberg.** *Rigidity, Force and Physical Geometry.* [A methodical and detailed account of such topics as the sensory criteria for rigidity and solidity, the definition of fields and forces, and the relation of geometry and gravitation. Deserves careful reading by those interested in the philosophy of science.] **H. Kelsen.** *Causality and Retribution.* [Traces the source of "the belief that events are determined by an absolute law, that is, the origin of the assumption . . . that each event must be the necessary effect of a cause according to an inviolable law" in the "evolution of human thought" from Thales and Anaximander to Malebranche. "Reality, however, as it now appears to human knowledge, admits of no inviolable law as a scheme of interpretation. The transformation of the notion of causality, the last step of which is the replacement of absolute necessity by simple statistical probability" strips causality of the superstition that necessity is the instrument by which "*Δίκη*, the goddess of retribution, punishes evil-doers and at the same time keeps nature in its prescribed course".] **J. Somerville.** *Umbrellalogy, or, Methodology in Social Science.* [An amusing ironic plea, in the form of an imaginary letter, for recognition of the new science of the umbrella. This entertaining and well-sustained conceit introduces the thesis that predictability is the touchstone of scientific method. "Any body of doctrine or collection of truths is scientific to the extent that it yields the power to predict in relation to the subject-matter of its choice."] **E. Zilsel.** *Physics and the Problem of Historico-sociological Laws.* [In spite of our ignorance of "initial conditions" and the difficulty of finding "isolated systems" in history, "historical phenomena are scarcely more difficult to predict than the weather and certainly not more difficult than volcanic eruptions and earthquakes". There is, therefore, no good reason for supposing that history uses methods essentially distinct from those of the physical sciences. The type of law to be expected bears some analogy (though with important differences) to the statistical laws of physics. Some examples are given.]

(A well-documented and provocative article.)] **N. D. Humphrey.** *Social Insight, Nuance, and Mind-Types: A Polar Hypothesis.* [Social scientists divide into two groups, "concerning themselves respectively with the 'quantitative' or 'qualitative' aspects of social data". The conflict between the two "has its roots in types of mind, and their related abilities to communicate with each other". The quantitative school is perhaps not really "interested in behavior at all, but rather in the conditions for behavior" while the others study "social behavior as such, with its abstractions viewed as being more closely related to the organic totality of persons, their interactions, and their products". The varying types of mind here assumed may have been fostered by early training in childhood.] **J. Carnus.** *The Cosmological System of Pierre Bayle.* [A report on "the philosopher whose work best represents the type of thought and expresses the aspirations of the French writers of the eighteenth century". "If he were better known and better understood, he would acquaint us with a philosophy that would be more human, more true, more constructive."] Reviews. Technical Scientific Section.

ix, 1 (January, 1942). **R. B. Winn.** *Philosophy and Science.* [A defence of philosophy, regarded as "the study of reality in terms of concepts and by means of reasoning" against the "weary pessimism and compromise prevailing in many professional quarters". "We prefer to think that the field of philosophy is a forum of life . . . where the main activity consists in an eager search of understanding and in an intelligent building of beliefs fit to live by."] **C. H. Miller.** *The Limits of Freedom in Philosophy.* [Suggests tentative reasons, of a sociological nature, for the neglect of "the theory of time sponsored by William James". The clue is to be found in the "historical-mindedness" which is a "mental attitude or occupational psychosis peculiarly prevalent among academicians". Accordingly, "institutional philosophy, despite obligations to its supporting civilisation as well as to the ideal of free speculation, restricts its excoitations to a stereotyped chronometry."] **M. Smith.** *The Greatest Common Component in Science.* [Attempts, with questionable success, to find a definition of a "generalising science" which "compromises between extreme emphasis on observation and experience . . . and simplicity and generality."] **L. J. Lafleur.** *The R-Being.* [By definition the R-Being is "that entity which possesses all qualities which, expressed in English adjectives, begin with the letter R". The doctrine of its properties "not only constitutes a *reductio ad absurdum* of the ontological argument for the existence of God, but is parallel to the latter in many details, and thus provides a field, free from common emotional disturbances, where many of the demerits of the more serious argument may be pointed out."] **M. Farber.** *Logical Systems and the Principles of Logic.* [Elaborate discussion of the significance of many-valued logics.] **W. V. Metcalf.** *Idealism and Science.* [Accepts "the view that the ego can have direct knowledge only of his own subjective conscious experiences" but "questions only the conclusion of the sounder idealist (*sic*) that the rational beliefs of the ego can never transcend" these subjective data.] **R. S. Lillie.** *The Problem of Synthesis in Biology.* [Reaches the conclusion "that the sharp separation of physical and psychical is not possible to a comprehensive theoretical biology."] **G. Bergmann.** *An Empiricist Schema of the Psychophysical Problem.* [An outline, "in broad strokes and in a synoptic manner" of the general principles of "Scientific Empiricism" in their bearings upon the complex of questions commonly referred to as the

psychophysical problem.] **R. W. Gerard.** *A Biological Basis for Ethics.* [The sort of essay that Huxley might have written if he were alive to-day. Provocative and informative, though some crucial steps in the argument are made to seem somewhat more plausible than they in fact are.] Books received.

ix, 2 (April, 1942). **H. H. Dubs.** *The Principle of Insufficient Reason.* [Stresses the importance of distinguishing between two senses of probability as connoting the frequency distribution of events and "subjective human expectations" respectively. Only in the latter sense can probability properly be said to characterise single events. The principle of insufficient reason is "quite out of place among frequencies" but "is quite applicable and indeed reasonable" when interpreted as concerned with expectations. But the principle cannot provide the basis for a theory of objective probability (frequency distributions). "... any theory of probability which admits among its postulates, even to a qualified extent, the principle of insufficient reason, thereby implies that probability is primarily concerned with ideal degrees of human expectation".] **A. P. Ushenko.** *The Problem of Causal Inference.* [Claims to be "a refutation of Hume on causal inference". "... Hume's argument is invalid unless it is assumed, contrary to his own relational theory of time, that mere difference in dates can affect the course of nature."] **H. J. Phillips.** *Causation and Selectivity.* [An essay in Whiteheadian modes of thought. "Causation must be supplemented by an extra-causal operation of a selective nature." "What a cause does, then, to the effect is not and cannot be completely determinate. It dictates to the effect that it can only realise this, that or the other form. But the effect being an act must realise some form. Which form it realises can never be discovered by the most complete knowledge of causal determination. Its own action of realising one rather than another equally possible form is an operation for which the name 'selection' is naturally suggested."] **S. Gerr.** *Language and Science.* [A stimulating, though somewhat speculative, discussion of the symbolism used by scientists, with special attention to the appearance of "generalised, functional terms" (e.g. the use of substantives as verbs) and the increasing reliance upon ideograms.] **P. Weiss.** *The Purpose of Purpose.* ["It is purpose which enables a man to change leisure, from an invitation to folly, into an occasion for living with a wisdom greater than that which a bitter struggle for existence would make possible."] **W. Cerf.** *Philosophy and This War.* ["The philosopher is confronted by the task both of appropriating anew the meaning of science, and of deciding the battle between systems of thought and value whose degenerate representatives are the catchwords employed by Democracy and Fascism."] **H. Rogosin.** *Scientific Method in Current Psychology.* [Psychologists are neglecting "the ever gradual development of psychology into a social rather than a biological science". Critical comments concerning semantics and allied movements and present devotion to measurement studies.] Reviews. Technical Scientific Section.

MIND ASSOCIATION.

The following is the full list of the officers and members of the Association:—

OFFICERS.

President.—PROF. H. H. PRICE.

Vice-Presidents.—PROFS. C. D. BROAD, W. G. DE BURGH, B. EDGELL, G. C. FIELD, A. D. LINDSAY, L. J. RUSSELL, J. W. SCOTT, N. KEMP SMITH, L. S. STEBBING, and G. F. STOUT.

Editor.—PROF. G. E. MOORE.

Treasurer.—MR. H. STURT.

Assistant-Treasurer.—PROF. B. BLANSHARD.

Secretary.—MRS. M. KNEALE.

Guarantors.—PROF. A. D. LINDSAY, DR. R. R. MARETT and SIR W. D. ROSS.

MEMBERS.

AARON (Prof. R. I.), University College, Aberystwyth.

ACTON (H. B.), Bedford College, London, N.W. 1.

AINSLIE (D.), The Athenæum, Pall Mall, S.W. 1.

ALBUQUERQUE (M. d'A.), 30 Rua do Conde, Ponta Delgada, Azores.

AMBROSE LAZEROWITZ (Mrs. A.), 69 High Street, Northampton, Mass., U.S.A.

ANDERSON (Prof. W.), University College, Auckland, New Zealand.

APPLEBY (M.), Royal University of Malta, Valetta, Malta.

ARMSTRONG (A. McN.), 23 Douglas Crescent, Edinburgh.

ATLEE (Prof. C. M.), Dept. of Education, University College, Nottingham.

AYER (A. J.), Christ Church, Oxford.

BARKER (H.), 10 Cairnmuir Road, Corstorphine, Edinburgh.

BARTLETT (Prof. F. C.), St. John's College, Cambridge.

BAUER (G. A.), 21 Clanricarde Gardens, London, W. 2.

BECKER (Prof. F. C.), Lehigh University, Bethlehem, Pa., U.S.A.

BEDFORD (E.), 32 Primrose Gardens, Hampstead, N.W. 3.

BEECH (F. P.), National Provincial Bank, Wrexham.

BEGG (J. C.), 12 Fifield St., Roslyn, Dunedin, N.Z.

BENNETT (E. S.), British Legation, Peiping, China.

BENNETT (J. G.), Coombe Springs, Coombe Lane, Kingston, Surrey.

BERLIN (I.), New College, Oxford.

BLACK (Prof. M.), 702 Nevada St., Urbana, Illinois, U.S.A.

BLANSHARD (Prof. B.), Swarthmore College, Swarthmore, Pa., U.S.A. *Life Member.*

BLEVIN (W. P.), 19 Kylemore Drive East, Pensby Road, Heswall, Cheshire.

BOODIN (Prof. J. E.), University Club, 614 South Hope Street, Los Angeles, Calif., U.S.A.

BOYNTON (Prof. R. W.), The University of Buffalo, N.Y., U.S.A.

BOYS SMITH (Rev. J. S.), St. John's College, Cambridge.

BRAITHWAITE (R. B.), King's College, Cambridge.

BRETT (Prof. G. S.), The University, Toronto, Canada.

BRIGHTMAN (Prof. E. S.), Box 35, Newton Center, Mass., U.S.A.

BRITTON (K.), University College, Swansea.

BROAD (Prof. C. D.), Trinity College, Cambridge.

BROSNAN (Rev. J. B.), Sylfield, Lord St., Westhoughton, Lancs.

BROWN (G.), 48 Lilybank Gardens, Glasgow.

BROWN (Dr. W.), Christ Church, Oxford.

CAMPBELL (Prof. C. A.), The University, Glasgow.
 CAMPION (G. G.), Inglethar, Bramhall, Cheshire.
 CARNAP (Prof. R.), Chicago University, Chicago, U.S.A.
 CHAPMAN (H. W.), Pedlar's Oak, Ivy House Lane, Berkhamsted.
 COIT (Dr. S.), 30 Hyde Park Gate, London, S.W.
 COOMBE-TENNANT (A. H. S.), 18 Cottesmore Gardens, Victoria Road, Kensington, W. 8.
 COFF (Miss M. T.), Wilson College, Chambersburg, Pa., U.S.A.
 COUSIN (D. R.), 7 Lorraine Gardens, Kelvinside, Glasgow, W. 2.
 COX (H. H.), Lincoln College, Oxford.
 CRAWLEY (Mrs. C. W.), Ladies' Park Club, 32 Knightsbridge, S.W.
 CROSS (Rev. F. L.), Pusey House, Oxford.
 CROSS (R. C.), Jesus College, Oxford.

D'ARCY (Rev. M. C.), Campion Hall, Oxford.
 DE BURGH (Prof. W. G.), 5 Belle Avenue, Reading.
 DENNES (Prof. W. R.), University of California, Berkeley, U.S.A.
 DESSOULAVY (Rev. Dr. C.), 171 Fentiman Road, S.W. 8.
 DIXON (J. L.), Top Bents, Long Grove, Seer Green, nr. Beaconsfield.
 DOERWARD (Prof. A. J.), The University, Liverpool.
 DRYER (T. E.), 27 St. Albans Road, Kingston-upon-Thames.
 DUCASSE (Prof. C. J.), Brown University, Providence, R.I., U.S.A.
 DUMBELL (A. T.), Runnymede, Riverbank Road, Heswall, Cheshire.
 DUNCAN (A. R. C.), 11 Moston Terrace, Edinburgh, 9.
 DUNCAN-JONES (A. E.), The University, Birmingham.
 DUNNICLIFFE (Rev. E. F. H.), All Saints' Vicarage, Nottingham.

EDGEALL (Miss B.), Berryhead, Cleeve Hill, Cheltenham.
 EDWARDS (Rev. E. W.), Queensberry Court, 9 Queensberry Place, S. Kensington, S.W. 7.
 EMMET (Miss D. M.), The University, Manchester, 13.
 EWING (Dr. A. C.), 69 Hurst Park Avenue, Cambridge.

FARIS (J. A.), Queen's University, Belfast.
 FIELD (Prof. G. C.), The University, Bristol.
 FINDLAY (Prof. J.), University of Otago, Dunedin, New Zealand.
 FOSTER (M. B.), Christ Church, Oxford.
 FRANKS (Prof. O. S.), The University, Glasgow.
 FURLONG (E. J.), Trinity College, Dublin, Eire.

GIBSON (Prof. J.), Bron Hwfa, Bangor, Wales.
 GILMOUR (J. S. L.), Descanso House, Royal Gardens, Kew, Surrey.
 GREENE (Prof. T. M.), Princeton University, N.J., U.S.A.
 GREGORY (J. C.), The Mount Hotel, Clarendon Road, Leeds, 2.

HALLETT (Prof. H. F.), King's College, London.
 HAMPTON (Prof. H. V.), S. T. College, Cruikshank Road, Bombay, India.
 HARDIE (C. D.), Gledstone Park, Bishopton, Renfrewshire.
 HARDIE (W. F. R.), Corpus Christi College, Oxford.
 HARVEY (Prof. J. W.), The University, Leeds.
 HAWKINS (Rev. D. J. B.), Karala, 66 Milbourne Lane, Esher, Surrey.
 HEADLY (L. C.), House on the Hill, Woodhouse Eaves, Loughborough.
 HENDERSON (G. P.), Manse of Tyron, Dumfries, Scotland.
 HOCKING (Prof. W. E.), 16 Quincy Street, Cambridge, Mass., U.S.A.
 HOERNLÉ (Prof. R. F. A.), The University, Johannesburg, South Africa.
 HOOK (S.), Department of Philosophy, New York University, Washington Square College, Washington Square, New York, U.S.A.
 HOPKINS (L. J.), 1385 Hillcrest Ave., Pasadena, Calif., U.S.A.

JACKSON (R.), The University, Edinburgh.
 JESSOP (Prof. T. E.), University College, Hull.
 JOHNSON (A. H.), University of W. Ontario, London, Canada.
 JONES (Prof. D. James), St. Oswald's, Victoria Drive, Bangor, Wales.
 JOSEPH (H. W. B.), New College, Oxford.

KELLY (Rev. A. D.), Kelham Theological College, Newark-on-Trent.
 KEYNES (Dr. J. N.), 6 Harvey Road, Cambridge.
 KNEALE (Mrs. M.), Lady Margaret Hall, Oxford.
 KNEALE (W. C.), Exeter College, Oxford.
 KNOX (Prof. T. M.), The University, St. Andrews.

LANGFORD (Prof. C. H.), Philosophy Department, University of Michigan,
 Ann Arbor, Mich., U.S.A.

LAING (B. M.), The University, Sheffield.

LAIRD (Prof. J.), The University, Aberdeen.

LAMONT (W. D.), Dept. of Moral Philosophy, University, Glasgow.

LEWIS (H. D.), University College of North Wales, Bangor, Wales.

LEWY (C.), Trinity College, Cambridge.

LIBRARIAN (The), The Aristotelian Society, 55 Russell Square, London, W.C. 1.

LIBRARIAN (The), Bedford College, London, N.W. 1.

LIBRARIAN (The), Girton College, Cambridge.

LIBRARIAN (The), Heythrop College, Chipping Norton, Oxon.

LIBRARIAN (The), The University, Jerusalem, Palestine.

LIBRARIAN (The), Lincoln College, Oxford.

LIBRARIAN (The), St. Xavier's College, Bombay, India.

LILLIE (Dr. R. A.), Drumtochty, Braid Rd., Edinburgh.

LINDSAY (A. D.), The Master's Lodgings, Balliol College, Oxford.

LUCE (Rev. Canon A. A.), Ryslaw, Bushy Park Road, Co. Dublin.

MABBOTT (J. D.), St. John's College, Oxford. *Life Member.*

MACBEATH (Prof. A.), Queen's University, Belfast.

MCINTOSH (G. F.), 40 Hardy Street, Hurlstone Park, N.S.W., Australia.

MACIVER (A. M.), The University, Leeds.

MACKAY (Prof. D. S.), University of California, Berkeley, Cal., U.S.A.

MCKEON (Prof. R. P.), The University of Chicago, Chicago, U.S.A.

McKIE (J. I.), Brasenose College, Oxford.

MACLAGAN (W. G.), Oriel College, Oxford.

MACLENNAN (R. D.), Dept. of Philosophy, McGill University, Montreal, Canada.

MACMURRAY (Prof. J.), University College, Gower St., London, W.C.

MACNABB (D. G. C.), Pembroke College, Oxford.

MALCOLM (Dr. N.), Dept. of Philosophy, Princeton University, N.J., U.S.A.

MALLET (E. H.), 14 St. James's Square, Bath.

MARSH (J.), St. Legier, Otley, Yorks.

MELLONE (Dr. S. H.), 62 Cluny Gardens, Edinburgh 10.

MOORE (Prof. G. E.), 86 Chesterton Road, Cambridge.

MORRISON (Rev. Dr. W. D.), 38 Devonshire Place, London, W.

MORROW (G. R.), 310 Bennett Hall, University of Pennsylvania, Philadelphia,
 U.S.A.

MUNDLE (C. W. K.), 9a Palace Road, Kensington, W. 8.

MURE (G. R. G.), Merton College, Oxford.

MURRAY (A. R. M.), Woodend, Jedburgh, Scotland.

MURRAY (Principal J.), University College, Exeter.

NAGEL (E.), Department of Philosophy, Columbia University, N.Y. City, U.S.A.

NASON (J. W.), Swarthmore College, Swarthmore, Pa., U.S.A.

NELSON (Prof. E. J.), University of Washington, Seattle, U.S.A.

NIKAM (N. A.), 23 Third Cross Road, Basavagundi, Bangalore, India.

NORTHROP (Prof. F. C. S.), 1891 Yale Station, New Haven, Conn., U.S.A.

OAKELEY (Miss H. D.), 22 Tufton Court, Westminster, S.W. 1.
 O'RAHILLY (Prof. A.), University College, Cork, Eire.
 OSBORN (Sir F.), Mountcoombe Hotel, Oak Hill Grove, Surbiton, Surrey.

PARKER (Prof. D. H.), University of Michigan, Ann Arbor, Mich., U.S.A.
 PATON (Prof. H. J.), Nether Pitcaithly, Bridge of Earn, Perthshire.
 PECK (A. D.), Trinity College, Oxford.
 PHILLIPS (I. W.), Department of Moral Philosophy, The University, Glasgow.
 PICKARD-CAMBRIDGE (W. A.), Worcester College, Oxford.
 PORTEOUS (Prof. A. J. D.), 3 Kingsmead Road North, Birkenhead, Cheshire.
 PRICE (Prof. H. H.), New College, Oxford.
 PRICHARD (Prof. H. A.), 6 Linton Road, Oxford.

RANADE (Prof. R. D.), The University, Allahabad, India.
 REID (Prof. L. A.), King's Coll., Newcastle-on-Tyne.
 RHEES (R.), 100 Goldhurst Terrace, N.W. 6.
 RICE (V. I.), c/o Mr. J. Hillard, 50 Argyll Road, East Kew, Victoria, Australia.
 RITCHIE (Prof. A. D.), The University, Manchester, 13.
 ROBINSON (Prof. R.), Cornell University, Ithaca, N.Y., U.S.A.
 ROSS (Prof. G. R. T.), 62 Marine Terrace, Aberystwyth, Wales.
 ROSS (Sir W. D.), Provost's Lodgings, Oriel College, Oxford.
 ROTH (Prof. Dr. H. L.), The University, Jerusalem, Palestine.
 RUSSELL (Earl), The University of Chicago, Chicago, U.S.A.
 RUSSELL (Prof. L. J.), The University, Birmingham.
 RYLE (G.), Christ Church, Oxford.

SCOTT (Prof. J. W.), University College, Cardiff.
 SHEBBEARE (Rev. C. J.), Stanhope Rectory, Durham.
 SHILLINGLAW (A. T.), 9 Muirton Bank, Perth.
 SHOLL (D. A.), County School, Dorking.
 SIDGWICK (A.), Trewoofe Orchard, St. Buryan, Cornwall.
 SMART (J. J. C.), Royal Corps of Signals, c/o Imperial Bank of India, Bombay.
 SMETHURST (Rev. A. F.), The Vicarage, Market Lavington, Devizes, Wilts.
 SMITH (A. H.), New College, Oxford.
 SMITH (Miss H. M.), Darnlee, Melrose, Roxburghshire, Scotland.
 SMITH (Prof. N. Kemp), The University, Edinburgh.
 SPRINKLE (Rev. H. C.), 25 Balm Grove Avenue, Asheville, N. Car., U.S.A.
 STACE (Prof. W. T.), The University, Princeton, N.J., U.S.A.
 STAPLEDON (W. O.), 7 Grosvenor Avenue, West Kirby, Cheshire.
 STEBBING (Prof. L. S.), Tremorrah, Tintagel, Cornwall.
 STEDMAN (R. E.), University College, Dundee.
 STOUT (Prof. G. F.), c/o Prof. A. K. Stout, The University, Sydney, N.S.W.

Hon. Member.

STRAWSON (P.), 11 Claverley Grove, Finchley, N. 3.
 STRUTHERS (L. G.), 50 Bedford Square, London, W.C. 1.
 STURT (H.), 55 Park Town, Oxford. *Hon. Member.*

THOMAS (L. E.), 18 Lhwynmadoc St., Craigwen, Pontypridd, Glam.
 TURNER (J. E.), 10 Middlefield Road, Liverpool, 18.

URMSON (J. O.), Magdalen College, Oxford.

VESTERLING (A. W.), 39 Barnsbury Crescent, Tolworth, Surrey.

WALKER (Rev. L. J.), S.J., Campion Hall, Oxford.
 WALLY (J. T.), Chardleigh Green House, Chard, Somerset.
 WATERHOUSE (Prof. E. S.), The College Villa, Richmondhill, Surrey.
 WEBB (Prof. C. C. J.), The Old Rectory, Pitchcott, Aylesbury, Bucks.
 WELDON (T. D.), Magdalen College, Oxford.
 WHITBY (Rev. G. S.), 5 Wilton Gardens, Glasgow, N.W.

WHITEHEAD (Rev. L. G.), Selwyn College, Dunedin, N.Z.
WHITEHOUSE (S. P.), The Parsonage, Dukinfield, Cheshire. *Life Member.*
WHITELEY (C. H.), The University, Birmingham.
WIDGERY (Prof. A. G.), Duke University, Durham, N.C., U.S.A.
WIGHTMAN (S), 10 Silver Birch Avenue, Fulwood, Sheffield.
WILLIAMS (D. C.), Emerson Hall, Harvard University, Mass., U.S.A.
WISDOM (J.), Trinity College, Cambridge.
WISDOM (Dr. J. O.), Durdham, Chilcompton, nr. Bath.
WOLFENDEN (J. F.), Schoolhouse, Uppingham, Rutland.
WOLTERS (Mrs. G.), 45 Albert Road, Caversham, Reading.
WOZLEY (A. D.), The Queen's College, Oxford.
WRIGHT (Prof. J. N.), The University, St. Andrews.
WROE (Rev. J. P.), D.D., Ph.D., St. John's Seminary, Womersley, Guildford.

Those who wish to join the Association should communicate with the Hon. Secretary, Mrs. KNEALE, Lady Margaret Hall, Oxford; or with the Hon. Treasurer, Mr. H. STURT, 55 Park Town, Oxford, to whom the yearly subscription of sixteen shillings should be paid. Cheques should be made payable to the Mind Association, Westminster Bank, Oxford. Members may pay a Life Composition of £16 instead of the annual subscription.

In return for their subscriptions members receive MIND gratis and post free, and (if of 3 years' standing) are entitled to buy back-numbers of both the Old and the New Series at half-price.

Members resident in U.S.A. may pay the subscription (\$4) to the Hon. Assistant-Treasurer, Prof. B. Blanshard, Swarthmore College, Swarthmore, Pennsylvania.